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ORIGINAL ARTICLES.

THE USE OF ALCOHOL FOR THE PURPOSE OF COMMITTING CRIME.

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The impression that alcohol is used to create nerve vigor, and give power to commit criminal acts, is only true in a limited degree.

Crimes that are supposed to have been committed by persons who deliberately used spirits for this special purpose, are commonly found to have been stimulated and provoked by other causes. To give spirits to a person and encourage him to commit crime, may not be an unusual occurrance, but its consummation is an accident, and exceedingly uncertain. On general principles the natural tendency of an inebriate's mind is to ignore all restraint and obligation, legal, social, and moral. The higher governing centers are depressed and more or less paralyzed. The senses are deranged, and false impressions are constantly received, and the power of analysis and reason is diminished and broken up. All higher relations of duty are obscured, and only the lowest most transient impulses control the mind. At this time temptations to acts that are criminal, urged on the bewildered mind, may be acted upon, from simple incapacity to reason and understand the consequences. This blurred mental state is of short duration, and merges quickly into anæsthetic physical and mental states; or delusional conceptions, of which fear and suspicion are prominent. The use of spirits to give courage to commit crime very often produces the opposite effect, particularly where an interval occurs between the use of spirits and the performance of the act. Thus two men drank freely for the distinct purpose of placing obstructions on the track of a railroad. They walked two miles to a lonely part of the road, carried some rails on the track and laid down to rest, and were both killed by the train they hoped to wreck. The anæsthetic effect of spirits overcome all power of execution.

The courage or stimulation of the first stage from the action of alcohol on the brain, is of short uncertain duration, and liable any moment to change to abject fear or other states. A saloon keeper hired an inebriate to go and shoot an active prohibitionist. A very adroit plan was arranged to commit the act and escape without recognition. The inebriate was properly concealed at night to await the return of the victim and given a bottle of brandy. He shortly after fell asleep and awoke in a paroxysm of fear, and went over to the victim's house and confessed, asking forgiveness. Had the victim appeared soon after the use of spirits and concealment, he no doubt would have shot him, or attempted

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the act. The next moment after the act a revulsive feeling might have possessed him to acknowledge the crime and do everything in his power to remove the consequences. Or if this did not follow, he would display stupidity, and be childish in his efforts to conceal it. There are two conditions in which crime is committed by persons who drink spirits for this purpose. One where they become the agents of others, and accept and carry out the plans arranged for them, either tacitly as by power of compulsion of an idea, or desire to please another. Secondly the act is the materialization of a delusion which has existed before and has been stimulated into activity by the use of spirits, In the first case some hypnotic state, in which an idea becomes dominent exists. But this is very unstable, and while it may be increased by alcohol, is uncertain in duration, and liable to change any moment. Thus in a case where a man after a glass of spirits manifested delusions of suspicion that his partner was robbing him, this was increased by giving him spirits and reiterating the idea and suggesting criminal revenge. It was noticed that there was a certain brief period when he might execute a criminal act, but before and after it was very doubtful. The brain could not be depended upon, it might act in an entirely different way and from a different motive apparently. A negro who had often expressed a desire to kill a man who had injured him, was seen to drink deliberately, and go towards the home of this man. He returned in an hour and with great excitement gave himself up, saying he had shot this man. In reality he had become bewildered and laid down and slept, and dreamed he had committed the act. Criminals have been known to commit crime, then drink large quantities of spirits to throw off suspicion of sanity where escape was difficult. When arrested partially intoxicated, they denied all recollection of the act. This would very clearly resemble reasoning insanity, and would be open to serious question. A number of instances have been noted where spirits were used at the time of committing the crime, but as a rule this was the work of imbeciles who were clearly unable to act with any ordinary reason on any matters. Alcohol clearly predisposes to criminality by lowering and paralyzing the higher brain centers which preside over consciousness of right and wrong. The immediate effect of spirits is to cause impulsive petty acts. For the present moment such acts might materialize into serious crime, but it would depend upon favorable conditions and surroundings. The unstable condition of the brain made so by alcohol, is more or less incapable of sustaining a preconceived idea and carrying it out, especially if time and continuous drinking follows. This is the rule to which there are exceptions, but these exceptions clearly follow certain circumstances which are easily traced. Often it is claimed that spirits are given for the purpose of obtaining undue influence in the making of a will or signing a contract. This is confirmed by a clinical study of cases, and facts pointing out the impulsiveness of the act, and absence of deliberation or forethought. Delusions and misconceptions of acts and motives are very common in all inebriates. Faulty reasoning, childish credulity and general failure of capacity to discriminate, and adjust himself to the conditions and surroundings, must of necessity result in wrong doing.

Although in many cases this condition is covered up, and only when the person acts along unusual lines is it apparent. All contracts and wills written by inebriates should be subjected to careful scrutiny. Not infrequently such acts display sound judgement, and it is found that they are the culmination of previous conceptions. Where they manifest imbecility and strange motives, it is clearly the workings of an anæsthetic brain, acting from suggestions from without or deranged impulses formed within. While a very large number of inebriates act rationally in ordinary affairs of society and business, and do not commit overt acts that come under legal recognition, it is a question if this is not the result of accident and conditions. There are strong reasons for believing, that a slight change of surroundings both mental and physical, would explode the degeneration which exists and manifest or bring to light insanity, criminality and idiocy. Instances are not unfrequent of acts of lawlessness and crime in inebriates previously law-abiding and honest citizens. It was not the last use of spirits which provoked the act, this only exploded a condition which had been gathering like a storm,

long before. The direction and form which this disturbance would take could not be foreseen.

The designing man who gives spirits and suggests crime, and wrong doing, is in peril of being the victim himself. He is practically exploding states of insanity, and trusting that he may be able to control it.

The inebriate or moderate drinker who uses spirits to give courage to commit some act, makes the same blunder of supposing that he can paralyze the higher governing centers and still direct and control the lower faculties. Where imperative ideas and delusions already possess the brain, alcohol may intensify them for a time, but confusion and uncertainty of thought and act is inevitable.

The claim that alcohol is used for the purpose of committing crime should be a question, open for evidence and one to be considered doubtful, until proven by facts that can have no other meaning. Crime committed when under the influence of spirits, will be found as a rule to follow uniform lines and be very much alike in methods of execution. If spirits have been used for the special purpose of facilitating the commission of crime, very wide differences will appear. No two cases will be alike, and doubt and uncertainty will complicate the factors in every case.

GRANULAR LIDS; WITH CASES IN PRACTICE.

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Synonyms. Trachoma, Granular Ophthalmia, Egyptian Ophthalmia, Follicular Trachoma.

Definition. An inflammation of the conjunctiva, accompanied with a contagious discharge containing micro-organisms, and extending over a period of months or years.

History. During the ages no disease of the eyes has produced so great a mass of literature.

The first is in the Vedic Writings where reference is made to "the small, red, soft and fleshy excrescences in the lids"—and to "copper and scarifications." But the ancient Egyptians were the first to give us oculists and "scarifications."

Celsus described it; and the ointment pots found in the tracts of the legions attest to its prevalence among the Romans.

Scarifications and removal of the scalp between the temples over the forehead were practiced for trachoma in those days.

Napoleon brought the disease with the French army from Egypt and it spread over Europe.

Its prevalence among the Indians of America dates back to the Aztec civilization.

Etiology. Bacteriologists show us a diplococcus in these cases, and Kock found two varieties in Egypt.

The fornix of the conjunctiva however is a perfect incubator for these bacteria, and they have been found in normal conditions! The secretion is contagious, and I have often seen the disease in nearly all its stages in the same family among the Algonquin Indians. It is more prevalent among those living in low lying districts, and rare among the mountaineers. The negro race is quite exempt, while it is very prevalent among the Finns, and American Indians owing in part to the low damp, and smoky rooms in which they dwell.

Pathology. This is unsettled, but there takes place a dilatation of capillaries from toxic paralysis of vessel walls causing lessened resistance pressure and slackened circulation.

Adenoid tissue, the "sentinal tissue" of the physiologist, is increased, lymph follicles or trachoma granules come into view when not obscured by papillæ, during acute catarrhal conditions.

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In the fornix are acinous glands or analogous Krouse's glands presenting forms resembling the "globlet cells" of the intestines. Hence so called. The micro-organisms are in the follicles.

The trachoma coccus is a diplococcus smaller than the gonococcus.

Fibro-albuminoid exhudations take place and gelatiusus degeneration of sub-conjunctival tissue. The central portion of the follicle breaks down; resembling in this tubercle.

Leucocytes, plasma, and cells abound. Softening of cartilages sometimes. Cellular elements, go into cicitricial tissue, and fatty degeneration of epithelium follows with contractions and deformity of lids.

This degeneration when extreme may induce an exerosis that extends to the cornea. Here micro-organisms are present the same as are often found in the epithelium of the pelvis of the kidney in pyelitis. Cultures from these have produced the corneal conditions to which reference has been made.

Symptoms and Prognosis. In mild cases of trachoma little may be seen except the frog-spawn-looking bodies in the basis of the palpebral folds especially the lower ones. They are sometimes of the same color as the conjunctiva they may resemble condyloma or they may be quite obscured by hyperæmic stages during acute attacks of conjunctivitis. The discharge may be slight or quite free during acute catarrhal periods.

The sticky nature of the discharge, and not its yellow color is characteristic.

Astheuopic symptoms are more or less present. Photophobia, and lachrymation marked in agravated cases with corneal complications. Cases recover spontaneously sometimes. Young subjects and recent cases are more favorable, while severer forms in badly conditioned adults generally leave permanent injury to the conjunctiva, and may impair the function of lids and cornea. Neglect and unfavorable envivonments play a sad roll in many cases, leading to complications destructive of useful vision.

Complications. Pannus, mechanical ptosis, ulcers of cornea, entropion, trichiasis, distichiasis, staptyloma of cornea, and xerosis are among the more frequent.

Treatment. The therapeutics of trachoma as far as local applications are concerned may be divided like music into two kinds, stirring and soothing. Using the one or the other as acute or chronic conditions predominate.

The agents most generally found useful and the conditions for which they are employed will best be conveyed by a reference to the cases cited. The general health must be improved by conforming as far as possible to all the laws of the Godess Hygiea, and in some cases steel, cork or oil with tonic doses of mercury may be given with advantage.

CASES.

I. Miss B. aet. 18, Nov. 1883. had trachoma, pannas, and ptosis, both eyes. Lids were with difficulty everted, when warty looking growths came into view. A 2 per cent. sol. of cocaine was used and larger cut off with scissors. Ung. Oxidi Flar (gr. ii.—℥i. vaseline) applied to the granulations each night for a few days, after which time copper sulphite used twice each week in office or by patient's father at home for two years almost continually when the trachoma, and its complications had disappeared.

II. Miss G. aet. 20, July, 1884, had trachoma and pannus both eyes. Pauni completely covering cornæ. Jequerity puldusted in both, caused œdema of lids, and profuse suppurative inflammation. Iced cloths and vaseline used for three days. Bovic acid sol. as a wash. The left was at the end of a month so much benefited that patient could see to go about without assistance. The almost complete disappearance of the trachoma, and pannus in the left was remarkable. The right was not benefitted to so great an extent, and the jequerity powder failed when applied again to this eye to produce any appreciable effect.

III. Mrs. S. aet. 30, June 1887, trachoma, more marked in right eye, where pannus was present on upper half of cornea. When first seen secretion was free owing to acute conjunctivites being present. Sol. atsepia (gr. ii.—℥i.) and boric acid wash used for a few days until acute symptoms had subsided. Tannic acid and glycerine; (saturated solution), alternated with Lapis Divinus was applied in office or at her home twice a week for one year unless acute catarrhal symptoms presented themselves, when recourse was had to the more soothing treatment men-

tioned. These acute attacks were neither severe nor frequent, and at the end of one year the patient was free from the trachoma. The pannus had gradually disappeared.

IV. Miss M., aet 18, trachoma, distichiasis and kororitis both eyes. The lashes irritating the cornæ were removed. Atropian and boric acid sol. were ordered. After two weeks My. Hyd. Oxid. Flor. was applied each night and copper sulphate twice a week.

The offending hairs when returned were destroyed with electroysis, and returning hairs again and again so treated until all were removed. "The blue stone" and ointment were continued almost continuously for two years at which time the patient was free the condition stated.

V. John M., aet. 10 Oct. 1894, had frog-spawn looking trachoma both eyes. Cocaine sol. 2 per cent. applied every five minutes for fifteen minutes. Noye's trachoma forceps was used to express trachoma granules. There was some pain during the operation, but little reaction following it. After a week blue stone was applied daily for six weeks when conjunctivae appeared free from trachoma.

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STAPHYLOMA OF THE CORNEA—PANNUS.*

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To-day we show you the woman upon whom we performed an iridectomy two weeks ago for an ectasia of the cornea. The case is one of very great interest to me. She has been troubled with exophthalmic goitre for about five years, and you will remember how prominent her thyroid glands were, and that her eyes protruded forward so you could nearly see the posterior surface of the sclera when she turned her eyes to the side.

About ten months ago she had the influenza, and following this she says had ulceration of the eyes. Since then she has been able simply to recognize light from darkness and has presented a pitiable sight. Almost the entire lower half of each cornea is protruded forward and is whitened, forming a condition commonly called staphyloma of the cornea, but as this means a protrusion of the iris through a corneal perforation, we will call this a keratectasia, as the cornea is protruded forward also. The pupil was drawn into this protrusion also leaving the iris in the form of a curtain behind the clear cornea. The tension was also somewhat increased and the anterior chamber shallow. This condition with the exophthalmus made the eyes very prominent. These conditions being present, we found three indications for an iridectomy; *first*, for the purpose of giving the patient vision through an artificial pupil; *second*, to lessen tension by establishing the connection between the anterior and posterior chambers; and *third*, for its tendency to lessen the ectasia of the cornea. We thought the case somewhat unfavorable from the presence of the exophthalmic goitre, but I am glad to say we accomplished more than we expected.

The iridectomy was done on the left eye as being the the one most favorable, and was necessarily done upward as the only clear cornea left was above. She has also been under treatment for her goitre by the use of the tincture of the chloride of iron as a tonic, and tincture of strophanthus, and you will readily no-

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tice a marked improvement. Her color is better, her thyroid glands smaller, her eyes less prominent, and she is better in every way.

The improvement in her vision and the condition and appearance of her eye that was operated on is what I want especially to call attention to.

The tension is lessened, the ectasia less prominent, and the artificial pupil we made is clearly shown. I tested her vision this morning and was very much gratified to find it 12-200, and it has been growing better ever since. I removed the bandage, and, I think, it will continue to grow better. We have, therefore, met all of the three indications we spoke of by doing the iridectomy, and it has partially succeeded in them all. After the operation we kept her eye bandaged over a week, although the corneal wound itself healed up very nicely and promptly. We hoped by this to help to lessen the ectasia of the cornea. This case, I hope, will impress on you what corneal ulceration may result in and also the importance of proper treatment.

She refuses to have the other eye operated upon as she thinks this good enough and says the other operation hurt her some. We used a four per cent. solution of cocaine, but she tells me she has been using a solution of that strength ever since her trouble ten months ago, and I think on that account she was less susceptible to the effect of it.

I might say here, that all operations on the anterior portion of the eyeball can be done usually without pain by making use of cocaine, and I have even seen eyes enucleated under the influence of cocaine. A four per cent. solution will produce anesthesia of the cornea and also of the iris, if it is allowed ten to fifteen minutes time to act. Cocaine is also of value in minor operations by using it hypodermatically.

We will now allow the patient to return to her home, as she is very anxious to do so, but we will request her to continue the course of treatment recommended for her goitre for some time to come.

The patient on going home was able to recognize her little girl at the station although she was not expecting to see her, and in the ten months since she had seen her, the child had grown considerably. She is now able to do her own housework and to go around the streets alone.

Case II. The next case, I am glad to show you as an excellent example of one of the terrible sequelæ of trachoma of which I spoke in my lecture yesterday, a cendition of pannus affecting the entire cornea, so that the patient is only able to tell light from darkness.

The patient before you has been a cowboy on the plains and he says it was there that he was first troubled with granular lids or trachoma, and it has been about twenty years since his first trouble. He has been treated with nearly all the remedies used in trachoma and pannus, and has gradually grown worse so that for about six months he has only been able to tell light from darkness, has photophobia, and is kept in a dark room. The cornea is opaque throughout its whole surface, and is vascular. The lids themselves are somewhat hypertrophied and have some secretion, but the principal difficulty is now the condition of pannus which has followed the conjunctivitis. There is a reflex present here which is rather rare, and fortunately so, as it is very annoying to the physician, and that is whenever his eyes are touched either for examination or treatment, it starts an attack of sneezing, which continues until the examination is completed.

The prognosis of this case is not good. He has already had nearly every known remedy employed, and has suffered much from many doctors, and like the man in the Scriptures, has "rather grown worse than better." This is a case in which I should advise the use of an infusion of the jequirity bean for the production of a violent inflammation. The theory is that a violent inflammation is produced with the formation of blood vessels, and that during the process of healing, the exudate is carried off leaving the cornea clearer than before. This is a heroic method of treatment, but as this is a desperate case, I think it would be appropriate. His eyes certainly could not be much worse than they are at present. Infection with gonorrhœal virus is sometimes employed for the same purpose, that is, the production of a violent inflammation with the hope that on recovery the cornea would be clearer. There is danger of affecting the other eye, and also other people with this virus, so jequirity is a safer remedy.

As this patient is now in the poor home, and there is no one to carefully carry out this treatment, we will have to satisfy ourselves with something else for the present unless we can get him in the hospital. I will therefore, recommend the use of tannin ʒi in glycerine ℥i, to be dropped in his eyes once a day.

I have found this of great value in less severe cases than this, and consider tannin and glycerine in varying strengths a very valuable stimulent for the patient's use. I will prescribe it here not in preference to the jequirity treatment, but because it seems to me the best treatment I could have used at present.

COMMUNICATIONS.

ERASION, EXCISION AND AMPUTATION IN JOINT DISEASE.*

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From failure of early diagnosis, from lack of early treatment, and from the neglect of early protection and fixation of inflamed joint surfaces, or on account of the intensity of the tubercular process, a large number of cases of tubercular joint disease still require operative procedures for the safety of the limb or the life of the affected individual. Fortunately, owing to a better appreciation of the conditions, these cases are becoming rare; it being more generally recognized that destructive results are preventable by early treatment; that is, by long-continued protection secured by rest and by effective mechanical devices. Proper management of these cases will result in the saving of a large number of these joints, even if the tubercular bacillus has secured a foothold in the osseous structures adjacent to the joint itself.

Much will depend upon the joint invaded; but the same principles of treatment will apply to all. The treatment may be summed up in the one word *rest*. This condition may be induced either by fixation, by extension, or by both. As a result, however, of the causes first enumerated many joints become so thoroughly implicated by the tubercular process that removal of the offending and dangerous foci becomes imperative.

Erasion (improperly termed arthrectomy) aims to remove by gouge and spoon and scissors the diseased hard and soft parts only; excision or resection goes a step further and takes away not only the implicated structures, but also an outlying area of bone; it is, therefore, still more radical, and aims to keep well outside of the disease. Amputation sacrifices a large portion of healthy tissue lying on the distal side of the diseased joint and is therefore still more mutilatory.

The proper application of these several operations to individual cases, therefore, demands a discriminating and judicious consideration. The decision will vary with the joint involved, the extent and character of the disease, the age and condition of the patient, the dangers of systemic infection, the risk to life, and the ultimate results to be obtained as regards locomotion.

As erasion is the least multilating and is both theoretically and clinically so effective an operation, it has steadily grown in favor, especially as it renders possible the continuance of function in a considerable proportion of cases. It is also, as a rule, a less severe procedure; while it leaves excision and amputation, the two more radical operations, still in reserve. Even should the more serious operation follow, the loss of time especially in chil-

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dren, will be more than compensated for by the increased growth of the limb.

WRIST AND ANKLE.

Erasion.—The ankle, wrist, tarsus and carpus may be considered in a single group, as the course of the disease in these joints is closely allied. The complicated character of the articulations involved makes extensive infection of the area very probable, and conservatism is almost universally recognized as the proper course of procedure.

The exclusion of all operative methods, as advocated by some authors, is unwise, and radicalism as to early amputation is equally wrong. A large number of these cases can be saved, and a useful walking member with movable joint can be obtained by the proper application of simple *erasion;* that is, the removal of diseased structures only and the continuance of proper mechanical appliances. Subsequent progression depends largely upon the situation of the foci. In an extra-articular ostitis that has involved cancellous tissue chiefly, the chances of securing good results by erasion without joint infection are excellent. By thorough removal and subsequent injection of anti-bacillary substances, arrest of the tubercular process is common. I have frequently secured excellent results by repeated gougings of small areas as they appeared and the joint surfaces have entirely escaped contagion.

In young cases, where time is not a very serious matter to the patient compared to the benefit to be obtained, these repeated operations are most helpful, as excellent movable joints are thereby secured. In more serious cases, the disease will involve the tarsal or carpal articulations, and extensive removals may become necessary; yet, in many even of these cases the disease can be eradicated without loss of limb.

For these reasons, conservatism, even though carried to an extreme degree, is desirable, save in those cases where the tubercular process is intense and the resistive power slight; in the latter cases, amputation should be thoughtfully considered. In erasion, knife, scissors and gouge are to be employed until apparently normal bone is reached. Whenever it is impossible to avoid the osseous structures underlying the cartilage the operation hould be arrested, since cartilage is almost certain to die and implicate the adjoining articulation. It is impossible to be certain when all the invaded soil is removed; but fortunately, nature is able to overcome a moderate number of bacilli, and it is not well to open and invade any unnecessary articulation. When in close proximity to an articulation a certain number of cells, even though left behind will be destroyed by phagocytic action, or a second operation may be undertaken.

Portions of the tarsus and carpus which are liable to infection and can not be reached through the wound may be helpfully influenced by cataphoresis; that is by driving iodoform into the tissues by the positive pole of a battery, using a current of about 5 milliampéres. By this method, or by hypodermic injections of iodoform in the region of the joint, the progress of the disease can often be arrested.

The incisions for erasion will vary with the site of the infected area, but for large removals I prefer the long lateral cuts as in excision.

The only guide as to the limit of removal is the extent of the disease. In children, the epiphyseal line should be avoided if possible. Unfortunately, however, in cases which demand excision, avoidance of this line is seldom feasible. The removal of the end of the tibia and fibula, together with the astragalus, necessarily shortens the leg very seriously, and ordinarily results in a stiff joint. In a large number of cases it is doubtful whether the patient is as comfortable as he would be with an artificial limb; practically nothing can be gained in growth if the lower epiphysis is removed.

In the carpus after operation, thorough fixation should be enforced by plaster-of-Paris, or other dressing, which will prevent motion and relieve the resulting inflammation. Drainage, cleansing and local injections of sterilized iodoform oil (10 per cent.) are essential in the after-treatment.

At the ankle and tarsus, the inflamed parts must be absolutely protected from the weight of the body; not for an instant should a step be taken upon the diseased member. Crutches should be used, both before and after operation.

Thorough drainage is necessary and demands the most careful attention to prevent subsequent contamination which will increase the suppurative process. The

great fault in such cases on the part of the surgeon lies in his failing to continue asepsis. A wound can escape contamination for weeks and even months, but only by the most scrupulous attention to the laws of cleanliness. I have seen chronic sinuoes kept sweet for eighteen months, but it demands "eternal vigilence."

At the wrist the lateral incisions will frequently give good exposure, with the least injury to important structures.

For reaching the tarsus and carpus the only rule to follow is to avoid vessels, nerves and tendons as much as possible and yet secure thorough removal. Many surgeons employ one or two long dorsal longitudinal incisions with transverse cuts if necessary. If tendons or nerves are cut during the operation they should at once be sutured with sterilized silk or catgut chromicized. If one incision only is used at the wrist, it should extend from the middle of the first metacarpal well upward upon the radius. As tendons are divided the ends should be grasped with forceps, marked in pairs.

Excision.—A formal excision is desirable in more advanced cases where the process has advanced to large destruction of bone tissue, surrounding one or more of the articulations, where the general health presents evidences of succumbing to the disease, yet where there is reasonable hope of saving the limb from amputation.

The ankle or wrist joints are first involved ordinarily, although the tarsus and carpus may be primarily the seat. In the latter case, amputation is the more common, especially in tubercle-saturated patients.

In operating upon the ankle, the line of incision will vary with the exigencies of the case, but I have found that very satisfactory exposure can be made without injuring the vessels, nerves and tendons by two long, lateral, curvilinear incisions, which can be extended as desired by cross cuts when both the astragalus and malleoli demand removal. The peroneal tendons are difficult to hold aside, but can frequently be saved by using a retractor, or by carrying around them a thread of silk, which is less in the way of the operator. If divided they should be sutured with silk or chromicized catgut. In the tarsus, I rarely make a cross dorsal cut (although the tendons can be sutured), as I am able to make a satisfactory atypical excision through long lateral incisions. I have never employed an osteoplastic operation, even when the os calcis had to be removed.

The most useful saw for joint-work is a key-hole saw made on the principle of Adams' blade, but with a longer cutting face. This can be easily managed and can be manipulated without injury to the surrounding parts. A strong, S-shaped bone retractor is also useful for lifting out the tissues and protecting them. A strong blunt knife is also of advantage in making the dissection.

Amputation is often necessary in extensive destruction of joints and especially in adults.

KNEE.

In children under 12 years of age it is exceedingly important to preserve the epiphyseal line in order to secure growth for as long a period as possible. Erasion is, therefore, preferable to excision in all cases where it can be done effectually. The incision varies with different operators; I do not deem it of any special importance. My preference is the horse-shoe flap with the convexity downward, as stitching of the tendo-patella can be more easily accomplished than suturing of the sawed patella when the straight incision is employed, and better drainage can be secured than when the convexity of the flap is upward; moreover, it gives excellent exposure of the articular surfaces and thorough examination can be made. In some cases lateral incisions alone are sufficient to permit removal when the foci of disease are few. The spoon, gouge, knife and scissors should be thoroughly employed until all the diseased hard and soft tissues are removed; the hollow-handled flushing spoon being particularly useful to carry away the *débris*. Diseased synovial membrane throughout the bursa should be thoroughly removed even though patient search is required. Boiling water may be freely used to destroy the remaining bacilli, or the cavity can be filled with an alcoholic solution of acetanilid or a sterilized glycerin emulsion of iodoform.

In a few cases it will be possible to close the wound without drainage, but where purulent infection is decided, it would be be better to drain with rubber tubing for at least a week.

In cases over 12 years of age, and in adults where the destructive process is

not too extended, a formal excision is usually preferable, although erasion can sometimes be profitably employed, particularly where infection seems moderate. In the latter case, lateral incisions with scraping and drainage are rarely sufficient.

As to the incision, the same rule applies as in erasion. In an adult, particularly, the incision should extend well above the diseased bone, and all the foci should be gouged unstintingly. A butcher saw with reversed blade to saw from within outward, with proper protection of the parts beneath, is an excellent instrument. Occasionally, the key-hole saw answers nicely, but the angle of removal can not be so accurately determined as with a larger instrument. It is very important for the surgeon to train his eye to make the section at such an angle as to bring the tibia in good line with the femur without a second cutting. As a rule, the popliteal tissue will yield sufficiently to permit the straight position; but if there is still interference the contracted tendons can be divided.

The patella need seldom be removed unless diseased, as it is of service if the tendon is stitched *in situ*.

Amputation—In children, the cases demanding primary amputation will be few; but occasionally the destruction of bone and joint by saturation is so extensive that removal is the only operation promising hope of life. In adults, the removal of the limb may frequently offer the best hope of life and of usefulness.

As to suturing of the bone, I prefer to trust to external appliances. If plaster-of-Paris is properly applied, good results can be secured, but a bracketed splint for adults is sometimes useful. A plaster cast can be freely opened on either side and the anterior and posterior halves can be removed for dressing, while the limb can still be held in good position without disturbance of the parts.

With thorough asepsis, dressings are infrequently required, and in children there is less disturbance and pain. Drainage tubes should be removed early. After healing, an apparatus should be worn until all tendency to deformity has disappeared.

HIP.

The question of erasion at this joint is one which depends largely upon the amount of disease, the age of the patient, amount of suppuration, etc. It certainly is an operation far less successful in this joint than at the knee, ankle or wrist.

In cases demanding early opening the pains are often severe and nothing short of complete excision of the upper end of the bone is advisable. In a few cases, however, where the exploratory incision demonstrates fairly good joint surfaces, the foci of disease may be removed by gouge, and the loss of bone substance and consequent shortening so frequently found in excision in young children may be avoided.

In osteomyelitic cases this puncturing of the bone with subsequent drainage is useful.

The disadvantage of erasion lies in the fact that it is almost impossible to decide as to the limit of the disease, and the continuation of the process ultimately demands excision; the latter operation is therefore the one employed by the majority of surgeons, as its results are beneficial in shortening the time of suppuration, and a fairly good walking member is secured.

I realize thoroughly that operative interference tends to disseminate the tubercle bacilli and, if undertaken, the extirpation should be thorough; hence the desirability, as already stated, of complete removal.

The two most practical routes by which the joint is to be reached are the anterior and lateral incisions; the anterior incision is the most suitable for exploration and where sinuses have already formed in this region. This incision is made so as to interfere as little as possible with the muscular tissue, the cut being begun just below the anterior spinous process and extending downward as far as necessary, the object being to enter the joint between the sartorius and rectus on the one side and the tensor vaginæ and glutei on the other. By this route, both muscles and blood vessels are uninjured. When the neck of the bone is reached the capsule can be divided, exploration of the head, neck and rim of the acetabulum can be made, and the amount of the diseased bone decided upon. A strong blunt knife assists greatly in the process of clearing the bone, and the neck can be divided without injury to the surrounding tissue, with a narrow key-hole saw, guided and guarded by the finger.

The head of the bone is often with difficulty released from the socket. This may be accomplished before section of the neck by manipulation of the femur and the use of a blunt knife or, as I usually prefer, after section of the neck by grasping the fragment with strong lion-jaw forceps. The ligamentum teres, if intact, must be severed. I have found a flexible knife, which can be made to conform to the acetabulum, useful in dividing this structure. All the diseased structure should be removed from the acetabulum and the surrounding area with thorough flushing, and with perfect asepsis the wound may sometimes be closed and perfect union secured. The joint should be filled with iodoform oil. In bad cases both gauze and rubber drainage should be employed for the first few days, the gauze being removed at the first dressing, and the rubber tubing as rapidly as possible.

When the suppurative process is severe, a posterior opening may be made and thorough drainage instituted. This method is most useful in the cases already described, or where the head of the bone has become separated and lies as a sequestrum.

In old or largely suppurative cases the lateral incision over the trochanter is desirable, as it gives a larger exposure of the joint, and when the trochanter is to be removed it is decidedly better. Whenever it is possible to strip off the trochantic attachments of muscles in a comparatively healthy bone, this method should be employed, as subsequent motion is thereby improved. As the femur is often extremely fragile in these cases where the ostitis has extended throughout the entire shaft, great care should be taken not to fracture the limb, especially in making rotary movements.

If the disease seems to have a definite limitation it will be better for subsequent locomotion to leave the trochanter, even if the drainage is somewhat interfered with by its retention. In these cases the drainage may be supplemented by a posterior opening, which often compensates for lost lateral space.

The power to steady the femur upon the pelvis is so important in locomotion that the retention of all possible muscles is essential, consequently I retain the trochanter whenever it is safely possible. I can show cases of excision when the femoral head and neck have been removed through an anterior incision, that can stand upon the toes of one foot without assistance and flex the thigh upon the pelvis beyond a right angle, can abduct and adduct the limb and have no deformity but shortening, a result which is a great improvement upon the condition attained after excision of the trochanter.

The majority of hip excisions, however, leave the patient a cripple for life, which readily accounts for the persistence with which many surgeons adhere to the conservative methods of treatment, and as an ankylosed limb in fair position is usually more serviceable for locomotion than an excised joint, the resection should not be undertaken until it is certain that suppuration will occur or that danger to life will ensue by delay.

The results to be feared are the exhaustion from long drainage, amyloid degenerations and general tuberculosis. While excision aims to remove the dangerous tubercular foci, yet the operation sometimes rapidly disseminates the disease. In a child with a bad antecedent history, an excision should be performed earlier than in a healthy child. Long continued, or very profuse suppuration also calls for surgical interference to avoid waxy degenerations. When in doubt, an exploratory incision is advisable, especially if suppuration is present.

In general, a case which is progressing unfavorably in spite of good mechanical treatment, with evidences of systemic infection, demands interference. Acetabular disease, when manifested by suppuration within the pelvis, is best arrested by thorough removal and drainage. Amputation is usually reserved for adult cases with old and suppurative sinuses and marked caries.

ELBOW.

In this region, erasion is decidedly the best operation for young children: by careful gouging of the diseased areas a very fair member can be secured. Whenever possible, the attachment of the biceps and triceps should be left intact. When the entire bone must be removed the retention of the periosteum, if healthy, at the points of muscle insertion is advantageous. Quite frequently the cancellous tissue of the olecranon can be gouged without disturbing the insertion of the triceps.

The incision for erasion may be lateral,

but a focus in the ulna is rapidly reached by a cut made directly over the olecranon. For formal excision, a posterior long incision directly over the olecranon, or two lateral posterior ones with cross cut, will give good exposure and save also the ulnar nerve.

The head of the radius is liable to disease, but section of the neck will often permit retention of the biceps. I have not found much difficulty in drainage, even when I have sawed through the olecranon and left it *in situ*. For excision, the narrow saw and ronguer forceps are the most useful instruments in addition to the gouge and curette. Care must be taken to remove every particle of diseased tissue, whether excision or erasion is employed, and the parts should be flooded with bichlorid and afterward with iodoform oil and other antibacillary substances.

Drainage tubes should not be retained too long. Plaster-of-Paris makes the best subsequent dressing, as the cast can be made thick at the bend of the elbow by longitudinal reverses, thus giving strength to the dressing when the windows are cut. Amputation is seldom required except in adults or in the worst class of cases.

SHOULDER.

The rarity of tubercular disease at this joint makes it difficult to speak with certainty as to definite results. My personal experience has been so limited that I can not speak from that standpoint, but my opinion is that erasion is decidedly the best operation for this region, and that it should be done as early as possible, as soon as the presence of pus is determined. The incision should be made so as to avoid as much as possible, interference with subsequent muscular action, and the vessels and nerves should be left unmolested. I have never seen an amputation for this condition.

CONCLUSIONS.

1. When operative measures are demanded, erasion is the preferable procedure, as it gives less subsequent deformity and results in better locomotion. This operation is especially applicable at the ankle, wrist and shoulder, frequently at the knee and elbow; rarely at the hip.

2. Excision is most useful at the hip. It is also largely employed at the knee and elbow; more rarely at the other articulations.

3. Amputation should be employed in rapid and extensive degenerations at the ankle, knee, wrist, elbow, and in old hip cases which have relapsed after excision.

4. In children, the less mutilatory operation should be first employed, even though repetition is required; but in adults, temporary operations are seldom advisable.

5. The necessity for operative treatment in joint diseases arises from neglect of proper mechanical measures. Protection and fixation of the joint in the early stages of tubercular invasion will nearly always result in a cure with movable joint and good function. These measures together with antibacillary injections and cataphoretic in-driving of iodoform are steadily decreasing the number of cases demanding operation. Motion and traumatism are the chief causes of inflammatory complications in tubercular ostitis, and often result in such an amount of suppuration and loss of bone as to demand removal of the diseased tissues.

Diphtheria Antitoxine by Electricity.

Dr. Nencki, of St. Petersburg, has succeeded in producing diphtheria antitoxine by means of electricity. His method is the following: Procuring by cultivation, in the ordinary way, a very virulent diphtheritic broth, he passes through this solution a continuous current of electricity of from 100 to 200 milliamperes for eighteen hours. The broth thus treated was found to be capable of curing a rabbit of diphtheria which had been inoculated with the disease eighteen hours before.—*Mod. Med.*

Treatment of Gastric Ulcer.

The method proposed by Boas, and which we have used successfully in several cases, consists in giving the stomach absolute rest, and feeding the patient by means of an enema consisting of six ounces of milk thickened with a little startch, two eggs beaten, and a half dram of salt. This should be administered once in four hours, while the patient is awake. Care should be taken to wash out the rectum at least twice a day.—*Mod. Med.*

THE TREATMENT OF LACTIC ACID EXCESS IN THE STOMACH.*

ALLEN A. JONES, M.D.,† BUFFALO, N. Y.

From a series of recent investigations, Boas concludes that lactic acid is not present at any time during digestion in a normal stomach; whereas, it has been taught, heretofore, that lactic acid is present in healthy digestion during the first thirty or forty minutes after the ingestion of food. Now, it is stated that not only is lactic acid absent at that time, but at all periods of the digestion of a test meal, whether early or late; whether or not the motion of the stomach is normal or tardy; whether or not dilatation of the stomach exists; and whether or not hydrochloric acid is present. Only one morbid condition of the stomach, so says Boas, is accompanied by the presence of lactic acid, and that is carcinoma. In this disease, lactic acid is said always to be present, and Boas further holds that when it is found in the stomach after a test meal it is diagnostic of gastric carcinoma.

Notwithstanding that Boas has thus found lactic acid only in malignant disease of the stomach, my experience in the matter has been quite different, as I have found lactic acid in the stomach during the first part of normal gastric digestion and also under abnormal conditions, such as persistent diminution in the secretion of hydrochloric acid, an absence of free hydrochloric acid, sluggish motility, gastrectasia, and malignant disease, especially when so located as to cause pyloric stenosis.

In the large majority of cases the treatment of lactic acid excess simply resolves itself into the treatment of its cause, but in some cases the cause may not be removed except by surgical intervention, as in gastrectasia from cicatricial pyloric stenosis, and in these cases remedies are demanded which will lessen as far as possible the production of lactic acid and neutralize it after it is produced, thereby preventing the nausea, vomiting vertigo, headache or other distressing symptoms, that are largely due to lactic acid poisoning.

In a short paper upon "The Role of Lactic Acid in Gastric Digestion" (*Medical News*, Dec. 30, 1893,) I mentioned several of the causes of the abnormal presence of lactic acid in the stomach. The first of these causes is a deficient secretion of hydrochloric acid, which may result from chronic catarrhal gastritis, from gastric carcinoma, from debilitating disease, as tuberculosis, or which may appear as a secretory neurosis.

The presence of hydrochloric acid in the stomach in normal quantity is usually antagonistic to lactic acid fermentation owing, probably, to its antiseptic properties; therefore, the endeavor should be made to reëstablish a more abundant secretion of hydrochloric acid by treating the cause or causes of its diminution.

In the case of catarrhal gastritis, lavage with the use of boric acid or boroglycerid solution and the aqueous fluid extract of hydrastis is very useful. It is a good plan to wash out the stomach three or four hours after a meal, so that some contents yet remain for chemical and microscopical study, using, at first, until the viscus is empty, simply warm water, preferably that which has been filtered or boiled, then using boric acid or boroglycerid solution, and, finally, to pour in a mixture of the subgallate of bismuth with the aqueous fluid extract of hydrastis, a part or all of which may be left in the stomach, according to the amount used. At another sitting, a weak solution of nitrate of silver (2 grains to 8 ounces) may be used after the mucous membrane is perfectly cleaned. This is one of the most effectual washes in catarrhal gastritis. The scope of this paper does not permit a detailed discussion of the local and general treatment of gastric catarrh, but simply to emphasize the importance of removing the causative elements behind lactic acid fermentation. While the various measures used to restore the proper secretion of hy-

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drochloric acid, when it is persistently below normal, are being carried out, the administration of hydrochloric acid, about thirty or forty minutes after meals, in 20-drop doses of the dilute acid, assists materially in temporarily staying lactic fermentation and in relieving the patient of weight, distress or flatulency.

If the cause of lactic excess is found to consist chiefly in impaired motility of the stomach, strychnin or nux vomica in liberal doses before meals, or two hours after meals, is attended with benefit. Also, the application of the interrupted current directly within the stomach stimulates and strengthens the musculature, and thereby the stomach is often made to empty itself in due time after each meal and so prevent fermentation from food stagnation. For this purpose also, expert abdominal massage by one who reaches deep, coaxing and pushing the stomach contents toward the pylorus often materially assists the stomach to empty itself. Emersonian exercises and certain Swedish movements seem to aid in emptying the stomach, while they certainly indirectly improve its tone.

Theoretically, physostigma increases gastro-intestinal peristalsis, and in some cases of atony it may be used to advantage. The extract may be given in quarter- or half-grain doses, three times daily, combined with extract of nux vomica and a little extract of belladona.

Antiseptics are remedies that may sometimes be used to advantage in conditions of deficient hydrochloric acid secretion, impaired motility and gastrectasia, but they are not so effectual actually as theoretically they make promise of being.

When, from indiscretion in diet, fatigue or constipation, a sudden attack of gastric fermentation occurs, no drug is better adapted to neutralize the poison and hurry it out of the system than is calomel, either in small doses frequently repeated, or in one good-sized dose, followed by a saline cathartic. Indeed, one-twentieth or one-fiftieth of a grain of calomel, given about four times daily, in a somewhat lasting condition of lactic acid fermentation, acts admirably as a gastro-intestinal antiseptic. The speediest way of ridding the stomach of an excess of lactic acid formed during an attack of so-called "acute biliousness" or "acute indigestion" is by lavage. The noxious elements are washed out, the intestine no longer receives irritating, improverly prepared chyme and the mucous membrane of the stomach is immediately soothed. The greatest relief is afforded by lavage in many cases of gastrectasia when the stomach is loaded with acrid, stagnant, poisonous material, some of which has, perhaps, been lying in it for a number of days. No other means as yet practiced is capable of giving the relief nor accomplishing the good that an occasional lavage does in these cases of food stagnation.

One or two grammes of chemically pure bicarbonate of soda, one hour before meals, promotes gastric secretion and motion and in some cases lactic acid is found in much very smaller quantities during and after its use. It has been found that soda, given later than one hour before meals, does not act as well as when it is given as above indicated, while if it is given at the beginning of, or during a meal, gastric digestion is retarded.

Drugs that are used as gastro-intestinal antiseptics are very numerous. A few seem to be effective in reducing the formation of lactic acid. Benzonaphthol, in doses ranging from two to ten grains, works well in some cases. It is best given in capsules soon after meals. Resorcin in the same doses may be given either in capsules or in glycerin and a little alcohol as solvents. Oil of eucalyptus is a good gastric antiseptic, and if not administered in capsules, it may be advantageously given incorporated in a powder with a little menthol, subgallate of bismuth and light carbonate of magnesia. With much flatulence this combination affords relief, and to it may be added re-ignited officinal charcoal. Hydrogen di-oxid is another antiseptic that has been quite largely used for its effects in the stomach. It is useful in arresting fermentation if given early enough to exert its action before fermentation has got well started. Unfortunately the drugs that are used as gastric antiseptics are necessarily given in such small doses that they are "a drop in the bucket" when mingled with the copious mass of semifluid, sour, decomposing stomach contents often present; more especially is this true in gastrectasia with food stagnation. One of the most effectual drugs in lactic acid fermentation is pure beechwood creosote, in doses ranging from one to five or more drops given in wine or mucilage after meals. In cases of im-

paired motility, with absence of free hydrochloric acid and lactic acid excess, I have seen the latter almost entirely disappear and the former re-appear under the use of this drug. Small doses seem to have as much effect as do large amounts of the drug.

The sulphite of sodium and permaganate of potassium are active antiseptics, but in my experience their administration has been attended by nausea, gastric distress or vague discomfort, so much so that they were necessarily discontinued.

There are some cases of dilatation of of the stomach due to cicatricial stenosis of the pylorus following gastric ulcer, in which hydrochloric acid is still secreted, but is not found free in the gastric contents when they are withdrawn, because of the overwhelming amount of lactic acid which arises from active fermentation of stagnating contents. In these cases the total acidity is not infrequently raised to 100 or over, and the administration of hydrochloric acid after meals gives rise to increased distress amounting at times to burning pain. While giving hydrochloric acid in such cases I have failed to find it free in the stomach-contents, and at the same time it has been quite noticeable that lactic acid fermentation seemed rather to be increased than lessened and the total acidity of already irritating contents was thus raised instead of lowered. By stopping the administration of hydrochloric acid and substituting a mixture of cerium oxalate, bismuth subcarbonate and light carbonate of magnesia, given between meals and at bedtime, not only was gastric comfort restored, but lactic acid was markedly diminished and free hydrochloric acid was found in the gastric contents.

Finally, one of the most important matters in the treatment of lactic acid excess is the correction of the diet, the more so as improper diet is the cause of lactic acid formation in many cases. Milk puddings, custards, pastry, ice cream, rich cakes, cheese, thick soups made with milk and cream, fancy entrées made with cream and starches mixed, salads and salad dressings ought to be very much restricted or interdicted entirely. It is noticeable that milk and cream, when taken alone, do not give rise to nearly as much lactic acid formation as when they are mixed with starchy foods, as potatoes, cornstarch, tapioca, sago, etc. As a rule, however, it is best to withhold milk at the outset until lactic acid is no longer formed in any but small quantities. Meats, eggs, stale bread, zweiback, fish, oysters and other plain foods should constitute the diet until the system is free from the effects of lactic acid poisoning.

Lowered general health should be overcome by out-of-door life and appropriate exercise. Sunlight, proper sleeping-rooms, hydrotherapy, massage, electricity, indeed, all those things that strengthen the nervous system, improve the blood and increase muscular tone so that the function of the stomach may benefit thereby.

Influence of Exercise upon Gastric Digestion.

Drs. Surmont and Brunelle (*Medical Week*,) have shown by experiments upon dogs that exercise has no special influence upon the motility of the stomach, but when not excessive, it has a marked influence upon secretion. It is concluded from the experiments made that persons who have taken a test meal should rest after the food has been taken, until the stomach fluid has been withdrawn, and that rest is advisable after eating, for a patient suffering from hyperpepsia, while exercise should be advised in cases of hypopepsia.—*Mod. Med.*

Analgesia of the Ulnar Nerve in Tabes.

According to the *Neurologisches Centralblatt*, Dr. E. Blernacki has discovered that the ulner nerve is analgesic in a large proportion of tabetic patients. He found it thus in fourteen out of twenty cases, and in half the cases found analgesia in the regions supplied by this nerve.—*Mod. Med.*

Dr. Tyrell, in a paper read before the Ontario Medical Association, relates his own personal experience with *hay fever*. He noticed, after careful observation, that lithæmia is a strong predisposing cause. By taking salicylate of soda at night he was invariably able to abort a threatened sttack. By further experimentation he found that 15 grains taken before breakfast, was the best mode of taking the drug, as it then had the combined action of a diuretic, diaphoretic and purgative. This line of preventive treatment proved equally efficacious in others.

CORRESPONDENCE.

TO THF MEMBERS OF THE PROFESSION OF MEDICINE IN THE UNITED STATES.

The following from the *Evening Star*, of Washington, D. C., of Saturday, July 22, 1895, is commended to the careful, thoughtful consideration of every member of the profession:

"THE HAHNEMANN MEMORIAL—A GRANITE ELLIPTICAL CURTAIN BEHIND THE BRONZE STATUE—TRIBUTE OF THE AMERICAN HOMEOPATHIC INSTITUTE TO THE PHILOSOPHER AND PHILANTHROPIST.

"At the recent meeting of the American Institute of Homeopathy at Newport, R. I., the committee on the memorial to Hahnemann, consisting of one physician from each state and territory, with the indefatigable worker and father of the project, Dr. J. H. McClelland, of Pittsburg, as chairman, made its report. The committee secured the assistance of several artists, notably J. Q. A. Ward, and an advisory committee, composed of five well-known members of the American Sculptors and Architects' League—three sculptors and two architects. They called for competitive designs from every source and country, offering prizes for the best three. The advisory committee, Messrs. Daniel C. French, George E. Bissell, Thos. Hastings, Olin L. Warner and Russell Sturgis, announced that, in their judgment, the first prize of $500 should go to the design of Charles H. Niehaus, of New York, the second prize of $300 to Joseph Loester, of New York, and third, of $200, to Herbert Adams, of Brooklyn. Marsh, Israels & Houder are the architects associated with Mr. Niehaus in his design, which has been accepted on the expert report by the monument committee. The description of the monument prepared by the committee says:

"The monument is a true ellipse in plan, its fundamental motive being the Greek exhedra form. The main lines of the central portion present a flat curtain wall with decorated tympanum above the impost. This, together with the projecting lines of the ampures, forms architectural vertical divisions of this elevation, which is thus resolved architecturally into component parts, resulting in a well proportioned and equally balanced composition. Rising from the platform in front of the central portion is a simple pedestal supporting the statue, upon the face of which appears the inscription '*similia similibus curantur*.' Other inscriptions and decorations are of a character significant of and glorifying the work methods and results achieved by the great reformer. The upper portion of the niche behind the statue it is intended to decorate in glazed mosaic, in colors, of a design composed of the foliage and flower of the cinchona plant. On either side of the arch are decorative emblems in bas relief —a bowl and serpent, the symbols of wisdom, and a lamp and book, typical of knowledge and instruction. The former in association with a palm branch, the latter with a wreath of laurel. The keystone of the arch bears a lion's head, the symbol of strength in leadership. Upon the rear the date of erection appears across the center in Roman numerals and the dates of Hahnemann's birth and death, 'Meissen, April 10, 1755,' 'Paris, July 2, 1843,' encircled with laurel wreaths, are inscribed to the right and left.

"In the center, filling the tympanum of the arch, appear two figures in bas-relief, emblematic of the science and art of medicine. Underneath this is a fountain in the form of a fluted basin fed by a stream of running water issuing from a carved dolphin; thus symbolizing the temperance Hahnemann practiced and taught. The style of the design is essentially Greek in spirit and in its form. The statue itself is in bronze. The features will be faithfully copied from the bust by David.

"The commemorative tablets are placed in two panels, on either side of the niche, upon the curved walls, representing in bas-reliefs of standard bronze, periods of Hahnemann's life. The monument is to

be built of the finest grained white granite, except the statue and entablatures, which are to be of antique bronze. The ground dimensions are 43 by 30 feet, and the height 22 feet.

"The cost of the memorial will be $50,000 of which $29,000 has been subscribed. No particular site in Washington has been selected as yet. Local homeopathic physicians state that there is one which has the preference, but it is not known yet whether it can be had."

After this, shall the Committee on the Rush Monument appeal to you again in vain? We, too, had estimated the cost of this monument at $50,000. After ten years, we have collected less than one-tenth this sum. This little band of homeopaths with a like estimate of $50,000, in three years have subscribed *more than half* that amount.

Shall you be willing to place in the same city, and that the capital of this great nation, beside the splendid memorial here described, of a foreign theorist, any less appropriate and artistic testimonial of the great patriot physician of the Revolution? Your committee are not forcing upon you any man of local or sectional reputation. His eulogists are your great men among the living and the dead, in this country and abroad. For the sake of the good name of the true Medicine, do not delay this work longer. Let every State, Territorial and county medical society in the United States hold special meetings to act upon it. Let every delegate and member at the recent meeting at Baltimore bear in mind that he was specially constituted at that meeting a member of the Rush Monument Committee, and the duty imposed upon him of collecting funds. Your committee, therefore, earnestly appeal to the professional pride of every reputable doctor of medicine in this country to forward his contribution at once to Dr. George H. Rohé, Secretary at Catonsville, Md.

ALBERT L. GIHON, M. D.,
Chairman Rush Monument Committee.

Pseudo-Tuberculosis.

Dr. Hugo Preisz (*Annales de Institut Pasteur*), chief of the State Bacteriological Institute at Buda Pesth, reported, four years ago, a case of pseudo-tuberculosis observed in a sheep. The microorganism found, differed from the bacillus tuberculosis of Koch. Numerous other persons have observed cases of pseudo-tuberculosis in the rabbit, the guinea-pig, and the mouse. From recent studies of this subject and comparison of the researches of various authors, Dr. Preisz arrives at the conclusion that the bacillus which he has discovered and which resembles, morphologically, Löffler's diphtheria bacillus, is a new pseudo-tubercular bacillus. The case described is the first one in which this disease has been observed in the sheep, and seems to be peculiar to this animal.—*Mod. Med.*

Microbes in Ice.

At this season of the year this question becomes one of importance. We quote as follows from the *Sanitarian*:—

"M. Richie, at the request of the French Government, has recently made a study of the microbes to be found in ice. It was found that ice which to the eye is perfectly transparent, and apparently free from any sort of impurity, may contain more than seven times the amount of organic matter which is allowable in water for drinking purposes. The specimen of ice was found to contain 175,000 colonies of germs for each cubic centimeter (¼ drachm). This specimen contained more than forty times the amount of organic matter allowable. This subject is one which ought to receive more attention from sanitary officials than it does at the present time."—*Mod. Med.*

Immunity against Diphtheria.

Ehrlich and Behring have determined that one fourth of a curative dose of antitoxic serum is sufficient to secure immunity. Among ten thousand persons thus treated, only ten suffered from the disease, although it was prevailing extensively. If the injection is made toward the end of the incubation period, it may not prevent the disease, but the attack will be greatly modified. The larger the dose, the longer the protection. The antitoxine is gradually excreted by the kidneys. When it has been entirely removed from the system, the immunity ceases. The injection of several small doses at intervals, is more effective in establishing immunity than a single large dose.—*Mod. Med.*

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SATURDAY, AUGUST 24, 1895.

EDITORIAL.

ACCIDENTAL DEATH DURING ANESTHESIA.

At a recent meeting of the Allegheny County Medical Society, one of the physicians present reported the accidental occurrence of death during a chloroform narcosis. In the ensuing discussion several similar accidental deaths were reported as occurring during the administration of chloroform, or that yet more dangerous anesthetic the A. C. E. mixture.

If statistics are of any value whatsoever in determining the positive and relative merits of anesthetics, it has been proven conclusively that of all the agents for the production and maintenance of surgical anesthesia, ether is the safest—certainly so far as immediate effects are concerned.

To be sure ether has some features objectionable as compared with other anesthetics, notably chloroform; but, on the other hand, it does not kill suddenly and without warning. Nor is it liable, when judiciously handled, to produce results more remotely lethel, as is so often urged by surgeons who prefer to take increased risk in order to obtain the conveniences presented by chloroform.

Chloroform considered apart from other anesthetics, may be called safe, so insignificant is its mortality rate in proportion to the frequency of its administration. But when compared with that of ether, the mortality of chloroform assumes such formidable proportions as to outweigh the sum of its conveniences and to render its use justifiable only in cases where the administration of ether is positively interdicted.

If this be true, sudden death during chloroform narcosis must be held an incident rather than an accident, for no surgeon has the right to give matters of convenience any weight in the balance as against human life.

It will be noted that surgeons who are accustomed to its use insist that chloroform is perfectly safe *when properly administered*. It will also be noted that the deaths incidental to chloroform anesthesia occur

in the practice of surgeons who insist upon its entire safeness—the safest agent must be used—and who undoubtedly administered the anesthetic properly—they could allow of no negligence.

Paradoxically, however, when thus properly administered, and consequently entirely safe, the proportion of deaths "by the dispensation of Providence" during chloroform narcosis is enormous as compared with similar "visitations" during ether narcosis. So that if the drugs are of equal safeness but the liability of a visitation of Providence must be taken into the calcution, ether would still proffer the lesser chances for translation.

Unfortunately, the ideal anesthetic, the one which will completely suspend sensation and motion without impairing consciousness or imperilling life; one which will produce such condition instantaneously and will have no bad after effects; in short, one which is entirely satisfactory and perfectly safe—the ideal anesthetic is not as yet discovered. Nor in the course of nature is it likely to become evident before that time when there shall be no more pain nor sorrow. Then it will not be needed.

Meanwhile the consideration of greatest importance is the proper selection and skillful application of the best offered from among the agents we have, which, although imperfect, are the greatest blessings vouchsafed suffering humanity.

The inconvenienced, annoyanced and danger arising from the haphazard method of obtaining an anesthetizer from among resident physicians in hospital service, and the handicaping of the operator, by having to give attention to the anesthetizer through fear lest the patient be asphyxiated, led one surgeon to sketch for his resident's benefit, some facts learned at the bed side, and proved of value by a very considerable experience, extending over years, in administering anesthetics. The directions were given dogmatically and without reference to authority other than the surgeon's own experience as an anesthetizer. With but little change these suggestions will be reproduced at another time in hopes that they may prove of some benefit to the practitioner, who at any time may be called upon to administer an anesthetic.

Microbes and Money.

That money is the root of all evil is one of the stock platitudes of the pulpit, but probably the preachers themselves do not fully realize the vileness of the gold and the filthiness of the lucre they are so fond of denouncing. That thriving colonies of microbic "small deer" are found on bank notes is one of the many uncomfortable revelations we owe to bacteriology; and it is equally well known that the germs of contagious diseases circulate with the metallic currency. So impressed with the danger arising from this source is Professor Demosthenes, of Cucharest, that he urges medical men to use strict antiseptic precautions in receiving their fees. He describes a practitioner who attends a case of scarlet fever or other infectious illness, receiving money which has been under the patient's pillow, or, at any rate, in contact with him. Then he goes straight to the bedside of another sufferer, and feels his pulse, and touches various parts of his person, giving the microbes received with the fee from the first patient an excellent chance of finding fresh pastures. In course of time the doctor returns to the bosom of his family laden, we are led to infer, with precious metals and bank notes, and distributes the day's catch of microbes among his children in returnings their caresses.

This is a terrible picture, but it suggests to our minds certain reflections. In the first place it does not appear superfluous to inquire whether it is not the custom of our brethren in Roumania to go through some process of purification, at least to the extent of washing their hands, before they pass from one patient to another. Again, are all Dr. Demosthenes's brother practioners paid in ready money? We imagine that many doctors of this country would cheerfully take the risk of contagion if they could get the cash. Professor Demosthenes concludes his discourse with the warning: "Be on your guard against your patient's money."

ABSTRACTS.

TREATMENT OF ASIATIC CHOLERA.*†

ELMER LEE. A.M., M.D., PH.B., CHICAGO.

Spasmodic cholera—called also malignant, epidemic, Asiatic, Indian, blue, and pestilential cholera—is generally epidemic, though not contagious. The first symptoms are generally experienced during the night, sometimes beginning with a light general uneasiness and moderate diarrhœa; at other times the symptoms come on violently and follow each other rapidly. In fatal cases death usually occurs at some period between six and twenty-four hours; in a few fatal cases the patient lingers two or three days. The ordinary course of symptoms are more or less diarrhœa; the discharges at first feculent, but soon presenting the appearance of rice-water or gruel; there are flying pains, or sense of coldness in the abdomen, as if purgative medicine were about to operate; the countenance is pale; there is nausea, vomiting, prostration of muscular power, and nervous agitation; cramps in the legs, arms, loins and abdominal muscles, more or less severe; small, weak pulse, intense thirst, and urgent desire for cold water; in most cases cold, clammy skin; all these symptoms may appear successively or almost simultaneously. In some cases the premonitary symptoms exist for eight or ten days; and sometimes the patient is prostrated at once. When the disease comes on suddenly the cramps usually begin in the fingers and toes, rapidly extending to the trunk; the eyes are sunken and surrounded by a dark circle; there is vomiting and purging of white matters mixed with flocculi; the features are sharp and contracted; the expression of the countenance wild and confused. The face, extremities, and often the whole surface of the body manifest a varying intensity of a leaden, bluish or purplish hue; the extremities shrunken, the nails blue, the pulse thready or wholly imperceptible at the wrist, arm, axilla, temple or neck; there is great restlessness, incessant jactitation, severe pain in the epigastrium. loud moaning or groaning, difficult and oppressed breathing; difficult inspiration' with short and convulsive expiration; voice hoarse, whispering, or nearly suppressed and plaintive; the tongue is white, cold and flabby, and the external temperature often sinks below 80 degrees; convulsions recur at short intervals, or a constant tremor exists. The secretions of bile, saliva, tears and urine are entirely suppressed, and a cadaverous odor exhales from the body. The patient retains his faculties to the last.

Some of the symptoms may be disproportionately severe, or may be entirely absent. Those usually regarded as pathognomonic are: watery dejections, blue appearance of the countenance or surface, thirst, coldness of the tongue, and pulselessness at the wrist.

The forgoing description of the symptoms of cholera is indicative of the nature of the disease calling for human aid. The time in which to treat the patient sick with cholera is exceedingly limited. What is to be done must be executed with rapidity. There is not a moment to lose between the time whenthe patient is first seen and the accomlishment of severely practical efforts. Many wise theories may be promulgated, but there are few practical measures that will avail against Asiatic cholera. The experiences during the cholera epidemic of 1892 in Euroge, both in Russia and Germany, produced in me a profound conviction that, for the most part, remedial agencies that have been used are of questionable utility. Nearly every prominent remedy proposed and tried has been found to end in greater or less disappointment. Years ago, great reliance was placed upon the far-framed "mild chlorid of mercury."

*Read in the Section on Practice of Medicine, American Medical Association, 1895.

†The Journal of the American Medical Association.

Twenty and ten years ago the remedy was given in large doses. Three years ago during the latest epidemic, small doses prevailed. Next to this, the synthetic drug salol, the product of the laboratory of the Imperial Institute of Experimental Medicine in St. Petersburg, was the most widely used and the most favorably received. Professor Nenski, the originator of salol, personally informed me that the value of the drug could not be seriously recommended as of much importance, but that it perhaps answered the requirements as far as any drug could answer, in the hands of his colleagues. Widely circulated and various reports, enthusiastically commending and moderately commending this remedy were received by the Professor in St. Petersburg, but he himself was silent as to its efficacy. The far-famed and seemingly unmatched drug, quinin, has been used, and has been held as a dazzling gem before the eyes of the profession by some of our best men, who believe that cholera is analogous to malarial disorders, and consequently the medicine which occupies the position of keystone in the arch, for malarial treatment, is a remedy suitable to contend with the rapid and desperate symptoms of Asiatic cholera. Quinin has a stout advocate in our own country, in the person of a well-known professor in one of the Ohio medical colleges. It was not used, to my knowledge, in the treatment of cholera during the last epidemic in Europe.

A remedy was brought to Hamburg during the latter part of the epidemic of 1892 by the representative of an English syndicate, who posed as a chemist, not a physician. His remedy was a preparation of ioding to be administered through the mouth. He call the medicine a periodate, and made some experiment upon patients in one of the cholera hospitals in Hamburg. His remedy, however, was not favorably entertained by the medical authorities in charge of the cholera patients, and whatever claims were reported came through the interest of a friendly correspondent of one of the Hamburg weekly secular papers. To show how misleading some of our supposedly authentic information often is, it is only necessary for me to refer to the report given in the "Year Book of Medical Progress," published in Philadelphia. Of all the progress made, of all the combined investigations during the entire epidemic of cholera throughout Europe in 1892, and there was an immense amount of original investigation and great effort made to discover a remedy, the curious spectacle in the Year Book, which alone refers to the remedies brought by an agent of syndicate from London to Hamburg, at the closing of the epidemic of cholera, shows that there are some things in our profoundest medical publications that are to be taken *cum grano salis*. Uretin was extensively used hypodermically for its alleged influence upon the secretions of the kidneys, upon the ground that the kidneys were to be aided by irritating them to greater functional activity to eliminate morbid elements through the urine. The result of many investigations recorded in Russian practice show that this drug is not to be commended. Digitalis was used, supposedly to benefit a weak heart. This remedy, if at all useful, could be little more than palliative. The use of acidulated water was extensively employed in different hospitals in Europe as a drink, but not prescribed as a remedy. The water was acidulated with HCl and H_2SO_4. Subcutaneous injections of salt water were made. The proportion of salt was one-half of 1 per cent., and the amount of salt water injected subcutaneously was sometimes as much as a quart at a single injection. In one instance, during an illness of several days as much as thirteen quarts was subcutaneously injected into the cellular tissue, principally that of the abdominal wall. This process of subcutaneous injection was known as hypodermaclysis. The purpose of the hypodermaclysis was to maintain the volume of the blood. The diminished volume of the blood is directly the result of the waste of its liquid portion or serum into the alimentary canal. In this serous discharge, flakes of intestinal mucous gave the name of "rice-water discharges" to the bowel evacuations, the particles having a resemblance to grains of rice. The general inflammatory state of the intestinal mucous membrane, throughout its entirety, drains the blood of its liquid portion rapidly, and collapse due to stagnation of circulation quickly ensues.

The remedies mentioned are only a portion of those tried, but there is no living advocate who to-day can point with unerring certainty to one single organic or in-

organic substance, howsoever administered, that can be safely depended upon in the treatment of Asiatic cholera. Both botany and mineralogy have been searched in vain for a cure for this disease.

The cause of this disease is perhaps accurately stated to be due to invasion of the blood and, secondarily, of all the tissues of the living organism, by toxins or ptomaines, which originate in the upper portion of the small intestine at the early stages of cholera. These products of organic activity, whether of animal or vegetable organisms it is here unnecessary to debate; but these noxious products enter the circulation through the villi of the intestine and rapidly and desperately poison the blood. It is clearly proved that the disease is the result of general blood poisoning from an intestinal origin. Whatever the chemic nature of the poison may ultimately be found to be, may be safely left to the bacteriologic laboratory. The practical and intensely important part that remains for physicians seeking to cure patients in times of this disease is to realize how much, as well as how little, it is within human power to do. The human organism is prostrated by a fierce and deadly poison. This poison is in the blood and in the ceils of the tissues, and its work of destruction is quickly and effectually accomplished. Reflectively, to say nothing of experimental research, it would seem to me that the rational and only course that could be advocated with scientific assurance of relief is to, as far as possible, literally cause to be removed these products which are death-dealing to the body in which they happen to be found. Now, in this same reflective mood, think for a moment and try with me to determine whether it is possible in such conditions as produce the symptoms of Asiatic cholera, it is safer to introduce other poisonous products to neutralize the noxious elements in the blood and cells, or whether it is a better process to, without the introduction of additional foreign substances, remove what we already find in the blood. To make this proposition clearer, it could be stated in another way, namely, the body is already bearing a crushing burden; shall we add other foreign substances as an additional burden to the load already carried? The principle seems to me to be at fault. The principle is the principle of allopathy, but in the light of facts is it a safe principle to follow? It is reasonably scientific to produce in the laboratory, definite results in vessels of glass by the use of fixed reagents; in the organic laboratory of the living body, no such definite results can be demonstrated. The vital principle is an entity which enters into the formula and may be represented by the unknown quantity x in algebraic equations. Great and laudable efforts have been made to prevent as well as to cure this disease by inoculation.

Ferran, of Valencia, Spain, thrilled the world ten years ago with his proposition of a universal cure for this disease. His glory was then at its zenith. His fame has long since faded. So obnoxious became his proposition to the government of Spain that laws were adopted to suppress Ferran's cholera inoculations.

A worthy colleague and laborious investigator, Professor Haffkin, of Pasteur Laboratory fame proposed a modified inoculation for the prevention and cure of cholera in 1892. A reporter of the New York *Herald* was inoculated at the Pasteur Institute, and with credentials sent to expose himself to Asiatic cholera at Hamburg in September, 1892. The same reporter had been similarly inoculated by Ferran in 1886 and had the courage to make further exploits in behalf of his newspaper, at Hamburg. A very widespread opinion prevails in America that the exploit of the New York *Herald* reporter during the ten days' stay as a nurse in the Hamburg hospital, constitutes a proof of the validity of Haffkin's claim, but the scientific world of Europe knows differently. *En passant*, it many be interesting to state at this place that further experiments have been made by Professor Haffkin in India with the cholera inoculations and, unfortunately for the proposition, reports have recently come to me from reliable medical sources, that a greater percentage are attacked with cholera who have been previously inoculated than of those who have not been inoculated. This subject of prevention, however, is to be discussed by me in a paper to be read before the Section on State Medicine.

The result of prolonged reflection, covering many years, and the observations resulting from personal experience in the cholera epidemic in Europe of 1892, is

the conviction that there is provided in the laboratory of the universe a remedy which surpasses the results of human ingenuity as much as does the sun surpass in brilliancy the light of the artificial lamp. The all-pervading and all-wide remedy, the greatest product of omniscient nature's laboratory, which alone can cope with this pestilential disease of the human race, is nothing more and nothing less than the unmatched, unmatchable H^2O. Pure water is absolutely the only trustworthy cure for cholera, and if it came at a great price it would probably be more greatly valued. The human organism is so constituted that if it is assisted by H^2O, every morbid element may be eliminated out of its domain. The acutely poisoned body quickly recovers its equilibrium and its harmony of action as soon as the processes of elimination can remove the invading poison. In the construction of the mucous lining of all the accessible cavities and channels it is prepared by an undiscernible law to successfully resist the entrance of every form of organism. The products of organic action alone are able to pass into the blood. If sufficient quantities of pure water, of a suitable temperature, are introduced into the body through the natural channels, it is actually possible to wash morbid products as well as organic forms of life, out of the human body. The mouth gives entrance to the causative germs in Asiatic cholera. That is quite conclusively established. The locality of the development and formation of the toxin in the earlier stages is determined to be in the upper end of the small intestine; and from experience, as well as from the powers of reflective analogy, there is no doubt that the system can be saved from death if the morbid entity, the germ, is literally deluged away from the alimentary canal by the copious use of a remedy that can not be of the slightest danger to the victim. The amount of water to be used varies in different cases. It is impossible to use too much; it is possible to use too little. From the earliest moment that the patient is seen, the propositions should be, first, wash the whole alimentary canal with pure water; wash the lower portion by introducing irrigations of warm soapsuds or merely warm water into the colon sufficiently frequently and sufficient in quantity to cleanse that portion of the bowel effectually. The frequency of washing that portion of the bowel which is accessible from the rectum should be one, or two, or three, or four times a day, according to circumstances. At the same time from one to ten quarts of warm pure water mildly medicated with peroxide of hydrogen or hydrozone should be administered at regular intervals, during the day, as the prescribed remedy by the mouth. If the patient vomits, very well. Immediately re-introduce the quantity of water that was vomited. No harm can be done in any case, and if it is possible to save life it is possible to save it through this method. It is the quickest and the surest method of exciting the activity of the kidneys, and is the safest. It is the rational and effective measure for maintaining the volume of the blood. It is the scientific process by which to establish cutaneous circulation in the capillaries.

The use of simple and useful hygienic measures are the same as in other prostrating diseases. Patients should be fed with regularity at not too frequent intervals, giving the proper time, between administrations of simple food, for its digestion. The use of appliances for maintaining the heat of the body are not to be neglected.

The precise details of the method of treatment indicated at this time will be forthcoming in a subsequent paper.

Foreign Bodies in the Bronchi.

S. Kobler (*British Medical Journal*) investigated the anatomical position of the bronchi to explain the undoubted greater frequency of foreign bodies in the right than in the left bronchus. In conjunction with V. Hovorka he made experiments on bodies hardened by chronic acid and found that the right bronchus, contrary to the old teaching, always run more in a line with the trachea than the left, thus confirming the previous work of Aslay and Kocher. Another factor, which decides which bronchus the foreign body enters, he considers to be the position of the individual at the moment when the aspiration takes place.

Dr. Helling says that a red nose is due to contraction of the arterioles and dilation of the veinlets. He claims to have cured a number of cases by tho application of a continuous current of moderate intensity for five to ten minutes daily.

NUCLEINS.*

WILLIAM H. PORTER, M. D., NEW YORK.

Ever since the application of bacteriology to scientific medicine, the biologists, the physiological chemists, and even the manufacturing chemists have tried to produce something out of the animal kingdom by which disease can be prevented and cured. In the list of substances produced we find immunizing serums, animal extracts, toxins, antitoxins, nucleins, etc. The antitoxin, so called, of diphtheria, and the nucleins are among the later productions, and are now begging for a position among reliable therapeutic agents.

All of the host that have gone before are far from being established upon a satisfactory basis, either chemical, physiological, or clinical. The best that can be said of any of them is that, in experimental work, a few instances of more or less complete immunization in the lower animals have been noted. As yet, however, nothing definite has been accomplished in their application to man, and some, like tuberculin, have been complete and deadly failures. Among the animal extracts an exception may be made in favor of the extract of the thyroid gland, which appears to have a decided influence in modifying the clinical symptoms of myxedema. But even here it is not curative; it simply stays the progress of the disease, and permits of a partial recovery. So long as the patient continues to take the extract the symptoms are held in abeyance; withold the extract, and all the symptoms at once return. How long these favorable results can be maintained is still awaiting final settlement. It should be remembered, however, in connection with these favorable results, that the exhibition of the thyroid extract often produces grave constitutional disturbances and cannot always be tolerated with safety.

Of the toxins and antitoxins none of them has yet reached an indisputable position among the list of therapeutic agents. For a time the brilliant results claimed for the so-called anti-toxin of diphtheria—which, however, is an absolutely unknown quantity as yet—made it appear that a grand discovery had been made, and one which would fully demonstrate the power of serum therapy. But as one closely scrutinizes both sides of this important question, and gets honestly at all the factors that enter into this involved problem, the evidence in favor of the value of antitoxin grows less and less certain, and one cannot but fear that it will ultimately prove a failure, as many of its predecessors have done. What, then, is the true position of the nucleins?

First of all it may be well to try and ascertain what nuclein is, and from whence it comes. Most of the substances already mentioned have been absolutely unknown quantities. Nuclein, however, appears to be a little more tangible substance, and one which has in a measure been formulated. It is described as a tetra-basic acid composed of carbon, hydrogen, nitrogen, phosphorus and oxygen, with the formula $C^{29}H^{49}N^{9}P^{3}O^{22}$.

The antecedent chemical substance, from which nuclein appears to be derived, is a complex molecule, apparently the product of a synthetic process in plant life by which a few atoms of phosphorus and iron are made to enter into combination with the proteid molecule. This more complex molecule has received the name nucleo-albumin. From this anabolic origin in the vegetable kingdom this compound gains access, as do the proteids, to the animal tissues, and here it appears to be deposited by preference of nature in the protoplasm or nuclei of the cells. It is also found in the secretions, and is then spoken of as destroyed or altered protoplasm. In some instances this may be true, but in other instances, as when it appears in milk and in the yolk of eggs, it can hardly be spoken of justly as destroyed protoplasm, for this is the only source of phosphorus and iron during the period of life, when milk is the only form

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*Read before the Litchfield County Medical Society, 1895.

of food supplied to the animal economy. It may be altered, it may exist in another isomeric form, but there is a wide difference between destroyed and isomerically altered protoplasm.

Nucleo-albumin, therefore, must be looked upon as a common constituent of all cell-elements. It is a substance which when isolated behaves like a strong acid; it is almost insoluble in water, but dissolves readily in the presence of a little alkali. This nucleo-albumin in many respects resembles the globulins, but differs from them in that it contains phosphorus. It is quite probable that the original nucleo-albumin is a vegetable gobulin, to which phosphorus and iron atoms have been added, as a little iron is always found in this substance.

Viewed in this light, nucleo-albumin is a synthetic product of vegetable chemistry where anabolic construction is continually taking place. When this nucleo-albumin is oxidized, or split up, it yields as one of its katabolic oxidation products a substance which is far more simple in its atomic structure than the nucleo-albumin from which it came. To this more simple molecule, $C^{29}H^{49}N^{9}P^{3}O^{22}$, the name "nucleic" has been given. Nuclein was first made from pus, then from spermatozoa, blood corpuscles, hens' eggs, the yeast plant, from liver cells, from cows' milk, etc. In fact, wherever nuclei are present a substance can be obtained from their contained nucleo-albumin, which, in a measure, is rich in phosphorus, soluble in weak alkalies, insoluble in acids and in artificial gastric juice, and which has a sticky character somewhat like mucin, but differing from the latter in containing phosphorus.

From this method of development it appears quite clear that the opinion held by many observers that nuclein is not a normal constituent of the animal economy is the correct one. Nuclein, on the other hand, is a katabolic product obtained from the oxidation or splitting up of the complex molecule known as nucleo-albumin, in the same manner that urea and uric acid are katabolic products resulting from the oxidation or splitting up of the proteid molecule.

Nuclein has never been found in the excretions as one of the katabolic bodies of nitrogenous composition for the normal elimination of nitrogen and phosphorus from the body. In fact, there is no evidence to show that such a compound is ever formed in the system, but simply that it can be made from the nucleo-albumin, which is a common constituent of all cell-protoplasm. Nuclein, therefore, must be classed as a purely artificial product of the analytical chemist's laboratory.

That the contained phosphorous of the nucleo-albumin is the source of the phosphorus compound, lecithin, is probably true. The phosphorus of these substances is the source of the phosphoric acid, owing to which the phosphates eliminated from the system are always in excess of the phosphates taken into the animal economy in the food-stuffs. This much has been eslished, but just where these oxidation changes take place is yet to be determined. The remaining nitrogen of the nucleo-albumin, after yielding up its phosphorus, appears to leave the body in the form of the higher oxidation products, such as urea, uric acid, etc.

As there is no tangible evidence at hand that animal life or animal chemistry can take simple molecules and build them up into more complex molecules, it cannot be argued logically that nuclein, if administered to the animal economy, can be converted into a nucleoalbumin, thus enhancing the nutritive chemical activity and life of the protoplasmic elements.

We are left, then, for a solution of the therapeutic valne of nuclein, if it has any, to one of two methods of explanation; methods by which all chemical compounds must be examined if they have not the common properties of the food-stuffs.

First, it may simply be a foreign body which acts by its irritating and poisonous properties, thus stimulating normal and inactive protoplasm to increased activity, without in itself undergoing any chemical change, as occurs with all the inorganic compounds. Or, second, it must be a substance which, from its organic nature, is capable of being rapidly oxidized, thus yielding heat and exciting active chemical mutations of a greater intensity and higher kinetic energy than occurs when the normal food-stuffs are introduced.

If it can be shown that nuclein stimulates the animal economy, either in normal or abnormal states, by either of the above methods, into a more rapid chemico-physiological activity, so that the system can more rapidly utilize the normal food-stuffs and develop a higher nu-

tritive state, and thus place the system in a higher state of resistance against toxic agents of all kinds, then nuclein can be classed as a valuable therapeutic agent. It must also be shown to accomplish this more successfuly than the well-tried and known alkaloids and glucosides before it can be set in advance of these tried agents in our therapeutic list. It must also be shown that, when nuclein is used, there is a rapid change in the excreta, so that abnormal katabolic products are replaced by those of a normal composition, both as regards quantity and quality.

All this must be accomplished before nuclein can be considered even as a valuable and reliable therapeutic agent, to say nothing of its displacing the old and well-tried remedies. When we look for this kind of evidence it is not to be found. All that can be discovered is the bold claim that the nuclein enters into the cell and gives to it, as it were, new life and new power to destroy microbic and toxic agents.[1]

It matters not what the therapeutic agent is; in every instance it must be demonstrated conclusively when applied practically at the bedside:

First, that it enhances the power of the enfeebled system to utilize the normal food-stuffs to greater advantage than otherwise would occur;

Second, that it increases the chemico-nutritive activity of the system, and thus increases the power of the animal economy to resist more effectually the intrusion of all abnormal conditions;

Third, there must be a marked change in the amount and number of the abnormal katabolic bodies eliminated in the excreta, and a marked tendency to change from the abnormal to the normal excretory products which indicate a normal state of the system;

Fourth, there must be an absolute decrease in mortality.

These are the conditions that must be met wholly or in part before any remedial agent can be considered as a thoroughly reliable therapeutic remedy. Working with this practical standard constantly before him, the clinician finds to his sorrow that many things which appear to work most satisfactorily in the experimental laboratory are total failures when applied to sick and suffering humanity. Thus far nuclein appears to be another compound to be added to the long list of total failures.

We would not in any way wish to discredit experimental work; but greater care should be exercised in making deductions from results obtained experimentally upon the lower animals, and in their application to the human economy in its various pathological states. Disaster and total failure have so repeatedly followed the adoption of random conclusions that now the clinician is naturally in constant doubt regarding any and all new discoveries.

When the biologist, the physiologial chemist, and the clinician have reached that harmonious stage which will make it possible to bring to their observations more uniformly into relation with one another, then we shall see the day when more successes and fewer failures will be recorded in medicine—(*Amer. Med. Sur. Bul.*)

1 Since writing the above the author has learned that the supposed germicidal power of nuclein has been ascribed to the use of impure nuclein, preparations in which the alkali used for their separation was not completely removed, the pure preparation being without such action. The natural inference herefrom would be that the contained alkali, and not the nuclein, is responsible for any germicidal action following its use.

Treatment of Cholelithiasis.

Blum (*British Medical Journal*) draws attention to the value of large olive oil injections in the treatment of biliary colic. These rectal injections can be substituted for the large doses of olive oil given by the mouth to which patients often object and which may disturb the functions of the stomach. In addition to the probable cholagogue action of these injections, olive-oil has a slight laxative action. The author follows Fleiner's directions in giving these large enemata; 400 to 500 c.c. of pure warm oil are introduced, at first daily and subsequently at longer intervals. The author gives details of five cases treated with benefit in this way.

Men and Women.

Twice as many women as men are afflicted with neuralgia.

Men are more liable to insanity than women, but after becoming insane die sooner.

Phthisis and pneumonia are more frequent and fatal among men than among women, while cancer and apoplexy kill more women than men.—*Med. Age.*

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE

Stomach Washing in Acute Alcoholism.

According to the *Courier of Medicine*, Dr. Heine Marks, of the St. Louis City Hospital, suggests the following sensible method of dealing with acute alcoholism:—

"In cases of acute alcoholism, where a quick restoration to a normal condition is necessary or desirable, I have devised a plan which has never failed to prove efficacious. This is simply washing out the stomach. The apparatus for this purpose consists of a glass funnel inserted in the end of a rubber tube leading into the stomach. Through this I pour plentiful quantities of salt water, until vomiting ensues, and the stomach is thoroughly washed out. The patient is then placed in a hot bath and afterward immersed in cold water. In fifteen minutes he is comparatively sober and the next morning perfectly so, and steady too. By this devise I have been able to dispense with salts, bromides, chloral and other drugs. This treatment arrests gastritis, and, in experienced hands, never fails of accomplishing the desired result, though in inexperienced hands it might be attended with great danger."—*Mod. Med.*

A Case of Functional Deaf-Mutism.

By W. B. Ransom, M.D.—This is an interesting case, and difficult of explanation. The patient was a miner, aged 19, in fair physical and mental condition. Three weeks before being seen by Dr. Ransom he had gone to bed in his usual health, but woke up in the morning unable to hear or to utter a sound. The deafness was so complete that any loud, sudden noise made near him, such as the firing of a cannon, was not heard. In addition, speech had entirely gone; he could neither talk, whisper, nor utter inarticulate noise, and he communicated with his friends in writing. His other special senses appeared normal. He had no paresis, fits, sickness, vertigo, nor tinnitus.

At the end of the week, when seen a second time, his symptoms remained unchanged, and he had, in addition, anesthesia of the palate and loss of the palate reflex.

The diagnosis was "functional" or "hysterical" deaf-mutism, and as a further test, the faradic current was sent through the larynx by means of an intra laryngeal electrode and one on the front of the neck. The result was a "kick and a yell," and on being told he could now speak, he at once answered, "Yes, I can;" and he heard and was able to reply to questions uttered in a whisper.

Dr. Ransom, in discussing the nature of the seizure, specially refers to the demeanour of his patient being quite the reverse of that of a malingerer.—(*British Medical Journal.*)

Hysterical (so-called) and Functional Deafness.

By Sir William Dally.—This paper contains details of two cases in some points similar to the foregoing, and the points of similarity in and the differences between them are gone into in detail.

Dr. Dally's first case was a young lady who was found by her friends one morning to be absolutely deaf to all sound. Communications had to be written, to which she made replies as usual, the tone of her voice being unaltered. Six months afterwards she recovered her hearing as suddenly as she had lost it.

His second case is given as an example of true functional deafness. A child, who had become intensely deaf without any middle ear disease, recovered completely after the evacuation of a large number of lumbrici.

The function of hearing had been suspended, and again restored when the sense irritation was removed; and such a case may be due to the same mechanism as is the suspension of hearing under a violent emotional influence.—(*British Medical Journal.*)

Malaria and Indigestion.

Dr. Paul de Groote, connected with the Belgian Congo Region, in a work relating to the hygiene of the Congo country, in which a careful study is made of the climate of that region, takes the ground that malaria often begins in that region with digestive disorders Studies of this question, which have been made by various observers in recent times, have accumulated much evidence in support of the view that malaria is commonly introduced into the system through the alimentary canal, either by drinking water infected with the parasites, or by receiving the parasites into the mouth through the inhalation of infected fogs. The giant cells exercise a protective influence through the action of phagocytes, a function which they exercise in a high degree. It seems very probable, indeed, that on the disablement of these cells through the toxic influence of the products of indigestion, the system loses its ability to defend itself against the parasitic action of malaria, and thus becomes subject to the disease under conditions which would not produce the disease in a perfectly healthy person. Many physicians have noticed the relation between liver and digestive disorders in malarial disease. This subject is one concerning which we shall doubtless know more a few years hence.—*Mod. Med.*

Urinary Test for Acute Pneumonic Tuberculosis.

Frænkel (*Hospital-Tildende*) has recently published a note in relation to this disease, in which he mentions the fact that Ehrlich's

diazo reaction was present and pronounced in all the fatal cases, but was absent in those that recovered. The test is as follows (we quote from Purdy):—

"Two solutions are prepared, as follows:—

"1. Two grams of sulphanilic acid; 50 cubic centimeters of hydrochloric acid; 1000 cubic centimeters of distilled water.

"2. A 0.5-per cent solution of sodium nitrate.

"In performing the test, 50 parts of No. 1 and 1 part of No. 2 are mixed, and equal parts of this mixture and of the urine in a test-tube is rendered strongly alkaline with ammonium. If the reaction be positive, the solution assumes a carmine-red color, which on shaking must also appear in the foam. Upon standing for twenty-four hours, greenish precipitate is formed.

"The test must not be considered positive unless a distinct red coloration extends to and includes the foam, on shaking."

This test is also present in typhoid fever. According to Ehrlich, when a faint reaction is encountered, it indicates a mild attack of fever and of short duration. Ehrlich's observation agrees with those of Frænkel, that the diazo reaction is present in pulmonary tuberculosis only in severe cases which run a rapid and fatal course.—*Mod. Med.*

Grief from a Medical Standpoint.

The nervous system requires complete rest after blows caused by sorrow. Recent medical observations show that the physical results of depressing emotions are similar to those caused by bodily accidents, fatigue, chill, partial starvation, and loss of blood. Birds, moles and dogs which apparently died in consequence of capture, and from conditions that correspond in human beings to acute mostalgia and "broken heart," were examined after death as to the condition of their internal organs, and it was found that the nutrition of the tissues had been interfered with, and the substance proper of various vital organs had undergone the same kind of degeneration as that brought about by phosphorus or the germs of infectious disease. The poison of grief is more than a man. To urge work, study, travel, the vain search for amusements, is both useless and dangerous. For a time the whole organism is overthrown, and temporary seclusion is imperative for proper readjustment.

Grief cannot be ignored, neither can it be cheered up. It must be accepted and allowed to wear itself away. Readjustment ment comes slowly. Sorrow, grief, and all great misfortunes should be regarded as conditions similar to acute infectious diseases which they resemble in result; and later, as convalescence from such diseases. Seclusion, rest, sleep, appropriate food, fresh air, sunshine, interests that tax either mind nor body, these are requirements in this class of illness.—*Charlotte Med. Journal.*

Impacted Fish Bones.

The difficulty of removing fish bones and similar obstructions, impacted at the lower end of the œsophagus, is well known, and various mechanical measures and appliances have been invented to deal with the difficulty. One of the most simple, however, and it reported one of the most effectual, in the case of impaction of such foreign bodies, is to administer to the patient a pint of milk, and forty minutes afterward an emetic of sulphate o zinc. The fluid easily passes the obstruction, and is, of course, rapidly coagulated in the stomach into a more or less solid mass, which, on being ejected, forces the obstruction before it, and so effects its removal.—*Med. Times.*

Academie de Medecine.

Sudden death on the bicycle.—M. L. H. Petit reported three cases of sudden death following the use of the bicycle, all in persons suffering from a cardiac affection. The first case was that of man 60 years, robust in physique, who had practised with his teacher for a month, and who, during a lesson, feeling indisposed, called the teacher and died in his arms. The second case was that of a physician, who wished to reduce his size by bicycle-riding. He had never had any cardiac trouble. At the end of several months he was attacked with dyspnœa and excessive pain in the heart. He descended from his machine, seated himself on a bench, and died shortly after. The third case was that of a clubman, about 40 years old who died on his bicycle on one of the streets of Paris. He also had a cardiac affection.

From the 1st of January to the 27th of August, the Prefecture of Police issued 32,996 permits for the use of the bicycle. As many persons do not apply for permits until compelled to do so, it may be said that there are about 100,0000 persons in Paris who use the velocipede. It is probably not an exaggeration to estimate that of this number 1 in each 1000 suffers from some cardiac trouble, and it is therefore well to call attention to the risks which they run in this sport.

Old age in itself, according to M. Petit, should be regarded as a contraindication, without any reference to heart disease. The use of the bicycle requires a suppleness, an attention, and an expense of strength which cannot be permitted to elderly persons without fear of bad results.—*Gazette des Hopitaux.*

Chronic Cocainism of Nasal Origin.

Dr. Loewenberg (*Bul. Med.*) Two cases of the cocaine habit as a result of local applications of the drug to the nasal mucous membrane are reported.

The first, a young woman, with hereditary taint, had been given by her physician a powder containing cocaine hydrochlorate to apply to the nasal cavity three times a day for a coryza. The sensation furnished by this procedure proved such an agreeable one that by increasing gradually the number of daily applications the patient finally arrived at snuffing up twenty-five grains a day.

The resulting nervous manifestations were not long in appearing. They consisted in

agitation, insomnia, auditory and visual hallucinations, delusions of persecution, homicidal and suicidal impulses, etc.

A cure, though slow in coming, was finally effected.

The second case, like the first, acquired the habit therapeutically, but the resulting psychic disorders took the form of melancholia. This case was milder and yielded more easily to treatment than the first. It may be added that neither of these patients suspected herself to be the victim of a drug habit.

So good an authority as J. Lewis Smith has recently spoken against the practice of lancing infants' gums. In a paper read before the New York County Medical Association (*Medical Record*) he said the belief still prevails to a wide extent that the cutting of teeth is a common cause, not only of painful gums and poor appetite, but also of enterocolitis and other serious maladies, which are often allowed to run along until beyond the skill of the physician Our ancestors in the profession were to blame for the widespread impression that much disease is due to dentition, since at one time it was a common custom to incise the gums. As to lancing the gums, he thought one could get along as well without it. If the gums are red and irritated, there must be some other condition to account for the irritation. He did not think the physiological process of normal dentition was to be interfered with any more than any other physiological process.

SURGERY.

The Pulse in Clinical Surgery.

The *Revue Internationale de Medicine et de Chirurgie Pratiques* contains a review of a work by M. Francois Bertonnier on this subject (*N. Y. Med. Jour.*) In this interesting work, says the writer, the author first recalls Marey's statement as follows: "The pulse is the sensation of sudden swelling felt by the finger which palpates an artery. The blood-vessel that allows itself to be depressed becomes suddenly hard each time that a systole of the heart increases the arterial tension." Bertonnier then considers this physiological phenomenon with regard to its frequency, its power, and its rhythm. In two chapters he explains the connection between the pulse and the temperature, also the usefullness of examining the pulse in cases of severe hemorrhage. His principal conclusions are the following:

1. The discordance of the two curves, that of the temperature and that of the pulse, is often an indication of a serious condition.

2. In grave hemorrhage the great depression of the pulse that accompanies it has sffiuced occasionally to indicate the true diagnosis.

3. In traumatic shock or that following an operation the degree of slenderness, of frequency, and of irregularity of the pulse will be the most exact measure of the violence of shock and of the patient's vital resistance.

4. In traumatic crania-cerebral lesions extreme slowness of the pulse is a never-varying sign of concussion, of contusion, or of cerebral compression. Eventually, its acceleration with elevation of temperature is a sign of meningo encephalitis.

5. The pulse should often be a guide in surgical interference in traumatic or inflammatory affections of the abdomen.

6. The absence of arterial pulsation at the extremity of a member is a very important sign and calls for a prompt determination.

Finally, the pulse, under the influence of chloroform, by its irregularity, intermittence, and arrhythmia, indicates, even better than auscultation of the heart, that the valvular lesions are badly compensated for, and that there is danger in the administration of chloroform.

Sudden Death in Consequence of a Urethral Injection of Cocaine.

In the *Centralblatt f. Chirurgie* we find an account published in *La France Medical* by M. Reclus, of a case in which sudden death followed an injection of about six drachms of a five per cent solution of cocaine into the urethra. The urethral mucous membrane appeared to be quite intact, and the death was attributed to pronounced arterio sclerosis and to the undue quantity of the drug employed.—*N. N. Med. Jour.*

Creolin in Ulcers of the Leg.

Dr. S. Tousey (Medic. Progress.) In sloughing ulcers of the leg with overpowering stench and a thick layer of grayish slough, secreting a thin, watery fluid, Dr T. recommends a dressing of six or eight layers of cheese cloth, to be kept constantly wet with a 2-per-cent. aqueous solution of creolin. Creolin forms a whitish emulsion with water, which is not irritating, even to an eczematous skin, and which is powerfully antiseptic and deodorant.

It is reported that under its use the slough rapidly disappears and the odor is abolished almost from the very start. The bandage should be kept wet without removing it, for the dressing becomes very painful the moment it begins to dry; or the bandages may be prevented from drying by covering the wet pad of gauze with a layer of rubber tissue before the usual unbleached muslin bandage is applied.

When the slough and offensive odor have disappeared the ulcer is to be treated by either soothing or stimulating applications.

Asepsis in Catheterism.

A recent uumber of *Przeglad Chirurgiczny* the Polish surgical review, is largely taken up by Dr. S. Grosglik's article on Asepsis in Catheterism. Reviewing the methods usually employed for sterilizing catheters and bougies, he finds most of them to be unsatisfactory. Bacteriological experiments made by himself showed that neither mechanical cleansing nor the use of liquid anti-

septics, sulphurous-acid gas or mercurial vapors thoroughly sterilized instruments which had been artificially infected with cultivations of staphylococci and streptococci. This end can only, he affirms, be gained by employing moist heat Dr. Grosglik describes fully an apparatus, apparently simple and effective, which he has devised for this purpose. In this the instruments are sterilized in five minutes. Elastic instruments, it may be noted, are declared to be unaltered by the process. A useful bibliography is appended to this article.—*London Lancet.*

GYNECOLOGY.

Multilocular Ovarian (?) Cyst. Adherent to the Mesenterium which Furnished its Blood-Vessels and Completely Separated from both Ovaries.

George Buchanan, of Glasgow, (Interent. klin. Rundschau.

A curious case is here reported, which the author in thirty years' experience in laparotomies has met for the first time. Patient was 42 years of age, had three children, the last eighteen months previous to operation, with normal puerperium each time. The tumor was a large one, presenting all the clinical features of a multilocular ovarian cyst, and so completely filling out the abdominal cavity that after finding it free anteriorly and laterally the operator had to reduce its size with the ovarian trocar before being able to explore it posteriorly. The fluid evacuated was pale green in color, fatty, and contained white flocculi. Examined microscopically cholesterin, drops of fat, and epithelial cells were found. Posteriorly the cyst was adherent to the mesentery and a large coil of intestine. The adhesions were separated with the fingers, and a band containing large blood-vessels ligated with catgut and severed. The tumor was then removed, and some bleeding vessels, at the edge of the mesentery, ligated with fine catgut. No vestige of ovary, fallopian tube, or uterus could be detected in peritoneal covering or cyst wall. Utherus and adnexa were found in normal condition. Patient made an uninterrupted, complete recovery.

Its anatomical structure and the examination of its contents showed the cyst to be of ovarian and not of parovarian origin.

Probably the cyst grew from the ovary, became adherent to the mesentery in an early stage, receiving blood-vessels from it; through peristalsis it may have been drawn from the ovary, and its ovarian pedicle, stretched or twisted by some unusual motion, or the growth of the uterus in pregnancy, and thus atrophied and then absorbed.

A New and Speedy Method or Dilating A Rigid Os in Parturition.

(*Amer. Jour. of Obstet.*) Dr. Farrer related two cases of rigid os, in one of which, after endeavoring vainly to relax the cervix by the aid of chloral, bromide of potassium, and morphia, followed by most persevering attempts at digital and mechanical dilatation, with and without chloroform, he applied a ten per cent. solution of cocaine preparatory to incising the edge of the os. After five minutes, on introducing the finger as a guide to the scissors, the os was found widely dilated. In the second case, which, like the first, was that of a primipara (age 48), where no dilatation occurred, although the same means as were tried in the first case were used, he waited three days and then applied the cocaine. In four minutes the os was found to have yielded. He considered the dilatation to be due to the cocaine in both cases.

Uterine hemorrhages are usually treated by the internal administration of ergot, hydrastis, encalyptus, cinnamon or a combination of these. When these do not control the hemorrhages Dr. Talley has been using with excellent results *atropin sulfate* (gr. $\frac{1}{100}$) repeated with sufficient frequency to cause dryness of the throat. In private cases the administration of the drug is preferably by hypodermatic injection. The result is so rapid and permanent that it is used almost in a routine manner in the gynecologic clinic.—*Phila. Polychin.*

The Pelvis in Lame Children.

Prouvost (*Revue Obstet. Internat.*) says the obstetric prospects of little girls troubled with lameness are compromised, and as this, like many worse infirmities, does not always exclude the sufferer from marriage and impregnation, the extent to which the pelvic bones may become involved is a matter of interest to the obstetrician. Prouvost holds that in order to safeguard the pelvis the child must never walk without the aid of two crutches. In seven cases where no support was used, the child hobbling about without crutches or even a stick, there was distinct flattening of the pelvis on the side corresponding to the lame leg. The use of a stout stick or even of one crutch was found insufficient, in all observed cases, to ensure thorough development of the pelvis even when the deformity began at about the fourteenth year. In short, the crippled girl must make use of crutches till she is at least sixteen. In his paper Prouvost discusses the orthopædic aspect of the question very thoroughly.

The Cold Bath in Puerperal Septicæmia, and for High Temperature in Pregnancy.

Fochier (*Progres Med.*) raised a discussion on this subject when reading notes of a case in which toxæmia existed during pregnancy. She had seen no period since her first confinement six years previously, and mental symptoms developed. When the second pregnancy set in the sight failed. Milk diet was enforced. Eclampsia occurred, and notwithstanding palliative treatment the temperature rose above 105°, the pulse could not be counted, and breathing was stertorous. The patient was placed in a bath at 77° F.

Within ten minutes the pulse fell to 100, then to 80. The patient came to her senses, and was removed from the bath. Two hours later she was again placed in the bath, this time at 90°, and cold affusions were applied to the head for half an hour. The patient recovered. Gaulard mentioned a labor case in which a student conveyed septic infection. After delivery a rigor occurred, the temperature rose to 104°; the curette was used, and the temperature then rose to 106°. For a fortnight cold baths were given, the temperature being lowered till it stood at last at 98.° Suppurative parotitis developed during this treatment. Gaulard asked Fochier if the latter was not the cause of the ultimate cure of the patient. Both the cold bath and the provocation of abscess at a fixed spot were methods practiced in the Lyons lying-in hospitals. Gaulard had tried the abscess method, and found that the results were not satisfactory. He once injected turpentine subcutaneously, but the patient died with two enormous phlegmons. Fochier remarked that the cold bath should never be administered when the temperature oscillates, but only when it keeps high for a long time. This method requires greater precautions in high temperature during pregnancy and childbed than in the treatment of typhoid fever, where there are none of the great falls of temperature so frequent in disorders of gestation.

OBSTETRICS.

A Few Points in Obstetrics.

No branch of a physicians practice requires more self-poise, where so many complications arise, commanding our sympathy and demanding our skill, than that of obstetrics, and when disease and death follow a normal case of labor, the cause can be traced to none other than to ignorance or mismanagement, *Med. Rev.*

With these preliminary remarks, Ewing advances a few aphorisms relating to obstetrics.

1. Examine the urine a week or so before the exected confinement. Albumin need not cause alarm, unless present in large quantity, in which case the woman should be restricted to milk diet, given one-tenth grain of sulphate sparteine four times a day, and bowels kept open with cream of tartar, the object being, of course to relieve congestion of the renal veins.

2. Make no digital examination without first cleansing the hands and nails, together with the external genitals, with a solution of bichloride of mercury (1 to 2,000) and ethereal soap.

3. Empty the rectum thoroughly with an injection of warm water.

4. Make as few examinations as possible during progress of labor, and each time dip the hand first in the antiseptic solution.

5. If the presenting part emerges slowly from the womb, do not allow your impatience to so get the better of your judgment as to induce you to "assist nature" by pulling on the os. Probably all the deep pathological tears, calling for surgical interference, found on the right and upper anterior sides of the cervix, are caused by the finger of the accoucheur.

Vassali in the *Lombardy Medical Gazette* (Italy,) communicates the case of a birth of sextuplets, one of the few if not the only genuine cases on record of such an event. The children were delivered on the 115th day of pregnancy after straining at defecation. All the fœtuses were born alive. The large single placenta bearing the six amniotic sacs is preserved in the museum of the Obstetrical Society in Milan.

EAR, NOSE, SKIN.

Treatment of Acute Coryza in Nurslings.

(*La. Sem. Med.*,) According to Lewy, when acute rhinitis, which may occur in nurslings in summer heat as well as during winter cold, does not lead to such nasal occlusions as to prevent suckling, it needs no treatment. Sometimes, however, treatment is necessary, and the author has seen advantage from the use of terpin hydrate, 5 ctg. being given in children below one year, and 10 ctg. in children above that age. Vaselin should be used freely in all instances to prevent the formation of an eczema of the upper lip, generally a very rebellious lesion when consecutive to a coryza. As the nasal mucus in this affectiou has an alkaline reaction, it is well to incorporate a little boric or salicylic acid into the vaselin.

Where the obstruction from swelling of the nasal musco is so severe as to actually interfere with nursing, it is well to restore nasal potency with the use, on a cotton swab, of a five-per-cent. solution of cocaine; but this necessitates the constant attention of the physician. A simpler and yet efficacious way is to introduce into the nostrils small cotton cylinders dipped in a one-per-cent. cocaine solution and then compress the sides of the nose. The liquid is thus brought in contact with the turbinated bones, and, and at the same time, the head being depressed, it naturally escapes, so that none is swallowed.

As an adjuvant to the foregoing, insufflations may be made of a powder, to be used at each nursing, of cocaine and menthol, of each 10 ctg. Sugar of milk, 10 grn.; a pinch to be used each time.

Finally, in cases of purulent rhinitis, we should irrigate with tepid (non-saline) water and insufflate as before a pinch of the following:

Silver Nitrate	1 grn.
Powdered Talc	20 grn.

(Stearate of zinc may replace the talc in this instance.—Abstr.)

The Care of the Ears During the Course of the Exanthemata.

Dr. W. C. Phillips says that the frequent dependence of ear troubles upon the exanthemata was shown by statistics of the Royal Hospital for sick children in Glasgow. In 600 cases 131 originated during measles, 63 during scarlet fever, and others from other

exanthemata. Patients affected with these diseases exhibited a general inflammatory condition of the entire nasal and naso-pharyngeal mucosa, frequently extreme induration, both of which had a marked tendency to involve the eustachian tubes. Enlarged tonsels and lymphoid tissue were apt to become much increased and further aggravate the symptoms. The secretions retained in the tympanum, because of the narrowing of the tube, caused middle-ear inflammation. For prevention he recommended frequent cleansing of the nose and naso-pharynx. The child should frequently clear the nose by blowing. Keep the eustachian tubes clear from obstruction, if possible, from the first. This can be done by the use of sprays or douches of mild antiseptic solutions, Dobell's solution, boracic acid, diluted listerine, alternated hourly with medicated oil sprays.—*Medical Record.*

Acquired Atresia Vaginæ.

Blenk (*Centralbl. f. Gynak.*) relates the case of a girl who became pregnant; in order to procure abortion she allowed a solution of a mineral acid to be injected into the vagina, but without the intended effect. At labor the atresia could not be overcome, and craniotomy was necessary. The child weighed nearly 7 pounds.

Syphilis and Suckling.

Eudlitz (*Arch. Gen. de Med.*), relates a very grave case of contagion of this kind. Twenty-three years ago a woman suckled the syphilitic child of another mother. A chancre developed on her nipple; her own child became infected. The results were particularly disastrous to him, for though he is now 23 years old he is absolutely devoid of hair on the face, the genitals are undeveloped or rather atrophied, and he is in other respects quite a child.

How Cocaine Kills.

Maurel says that cocaine kills by: 1. Diluting the small vesels. 2. Paralyzing the leucocytes; strong doses taken by the stomach act in this way. The toxic effect is proportional to the number of leucocytes paralyzed. Small doses, hypodermically, or in the veins, may act by paralyzing some cells which then may become emboli. Large doses may be injected into the arteries without killing.

The Treatment of Severe Nose-Bleed.

Miot (*Rev. internat. de Rhin. v.*) The author states that severe bleeding from the erectile tissues of the nose is best checked by positive interstital electrolysis. This method can be employed, whether the hemorrhage is from a small or large area. The nature of the needles employed is practically a matter of indifference, though he believes that those of silver or copper are the most efficacious. The intensity of current employed ought to run from sixteen to twenty milliamperes, and the duration of each seance may be from eight to ten minutes. In exceptional cases three or four sittings may be necessary. Hemostasis in this region can be brought about without any bad results, though there exist between this region and the brain important vascular relations.

DERMATOLOGY.

Cannabis for Itching.

Phil. Polyclin. Mackenzie has found the Indian hemp to give relief in cases of skin diseases, where the itching was not amenable to local means. The full effect must be produced promptly. For this purpose he employs the tincture in doses of ten drops, on sugar, repeated as often as necessary.

NEWS AND MISCELLANY.

G. A. R: National Encampment, Louisville, Ky.

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